BRITAIN'S ONLY MAGAZINE DEVOTED TO THE AMSTRAD CPC 464, 664 AND 6128
No. 17 FEBRUARY 1987 £1.00

NOT an official Amstrad publication!!

AMSTRAD ACTION

THE MOULD-BREAKING MAGAZINE FROM FUTURE PUBLISHING

gave a Mastergame award our reviewer had to have several weeks intensive treatment before he would leave the game alone.' Anyone who thinks they may be suffering from the disease should contact Starglider's Anonymous on page 58.

PUBLISHING REVOLUTION

News has broken of a remarkable new development in the field of desktop publishing. AMS, producers of the highly succesful AMX Mouse, have released the AMX Pagemaker that they claim will give you 'freedom of the press'.

AMS

Many, seemingly wild, claims have been made for the product but official confirmation of its potential comes from a review in the Feb '87 issue of Amstrad Action, the first people to see the finished product. 'You will drool when you hear what AMS's Pagemaker can do.' Further investigation revealed that the package had 'the potential to create startlingly good newsletters, press releases, even small magazines.'

Unconfirmed eyewitness reports said that the publishers of several national daily newspapers, had been seen throwing themselves off tall buildings, after reading the AA review of Pagemaker. One ex-editor, made redundant by the arrival of Pagemaker, told us 'Do you mean me? Well if I get my hands on those people at AMS I'll rip their... (cont. p22)

STARGLIDER STRIKES

A frightening new disease is sweeping the country, apparently contracted by playing a new game called Starglider. Sufferers are unable to leave their computers alone and when pulled away from them sit in a trance like state mumbling 'but I've got to save Novenia'.

Medical ... phenomenon ... aren't s... expect... the ... ga...

The inhabitants of a quiet Somerset town were te... by a new computer game ... inhabitant, who identi... 'Bob', told us 'It's terri... realism is stomach turn... five minutes at the key... ing and running. The gr... pressure...aaaaaagh!' At this point the interviewee ran off in the direction of th... pub, where he was found sever... ater in a drunken stupor, tr... ce the barmaid that he was ... have 'just one more game'.

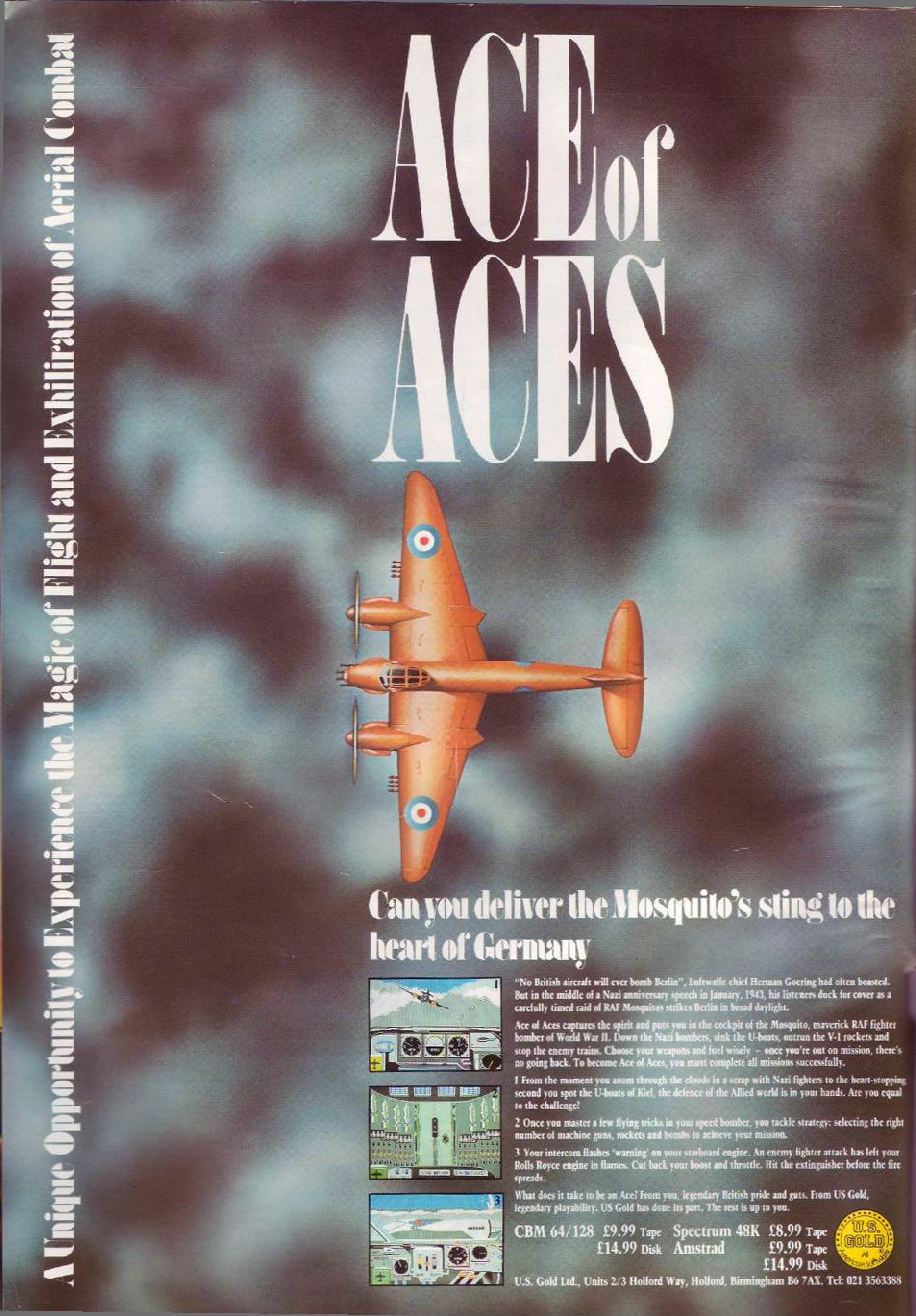
CHART TOPPING SUCCESS

On the heels of Frankie Goes to Hollywood, Angie from Eastenders and wimpy Wicksy comes another chart topping sensation, The Music Machine. this remarkable new add-on looks set to turn the music world on its head with some of the most exciting sounds heard for a long time.

After a day in the recording studio ... it the music correspondent from ... Action, Rockin' Rich, said 'Drum sound sampler, piano, echo and ... composer, midi ...

PAGEMAKER

Advanced desk-top publishing on your Amstrad



A Unique Opportunity to Experience the Magic of Flight and Exhiliration of Aerial Combat
ACE of ACES
Can you deliver the Mosquito's sting to the heart of Germany
"No British aircraft will ever bomb Berlin", Luftwaffe chief Herman Goering had often boasted. But in the middle of a Nazi anniversary speech in January, 1943, his listeners duck for cover as a carefully timed raid of RAF Mosquitos strikes Berlin in broad daylight.
Ace of Aces captures the spirit and puts you in the cockpit of the Mosquito, maverick RAF fighter bomber of World War II. Down the Nazi bombers, sink the U-boats, outrun the V-1 rockets and stop the enemy trains. Choose your weapons and fuel wisely – once you're out on mission, there's no going back. To become Ace of Aces, you must complete all missions successfully.
1 From the moment you zoom through the clouds in a scrap with Nazi fighters to the heart-stopping second you spot the U-boats of Kiel, the defence of the Allied world is in your hands. Are you equal to the challenge!
2 Once you master a few flying tricks in your speed bomber, you tackle strategy: selecting the right number of machine guns, rockets and bombs to achieve your mission.
3 Your intercom flashes 'warning' on your starboard engine. An enemy fighter attack has left your Rolls Royce engine in flames. Cut back your boost and throttle. Hit the extinguisher before the fire spreads.
What does it take to be an Ace? From you, legendary British pride and guts. From US Gold, legendary playability. US Gold has done its part. The rest is up to you.
CBM 64/128 £9.99 Tape £14.99 Disk
Spectrum 48K £8.99 Tape
Amstrad £9.99 Tape £14.99 Disk
U.S. GOLD
U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 3563388

THE LINE-UP

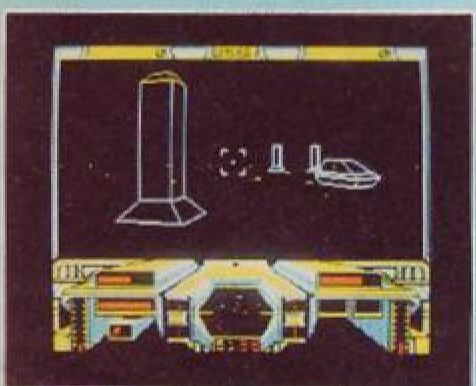
AMSTRAD ACTION FEBRUARY 1987

FRONT END

EDITORIAL ● NEWS ● LETTERS

ACTION & ADVENTURE

GAMES ● MAPS ● THE PILGRIM



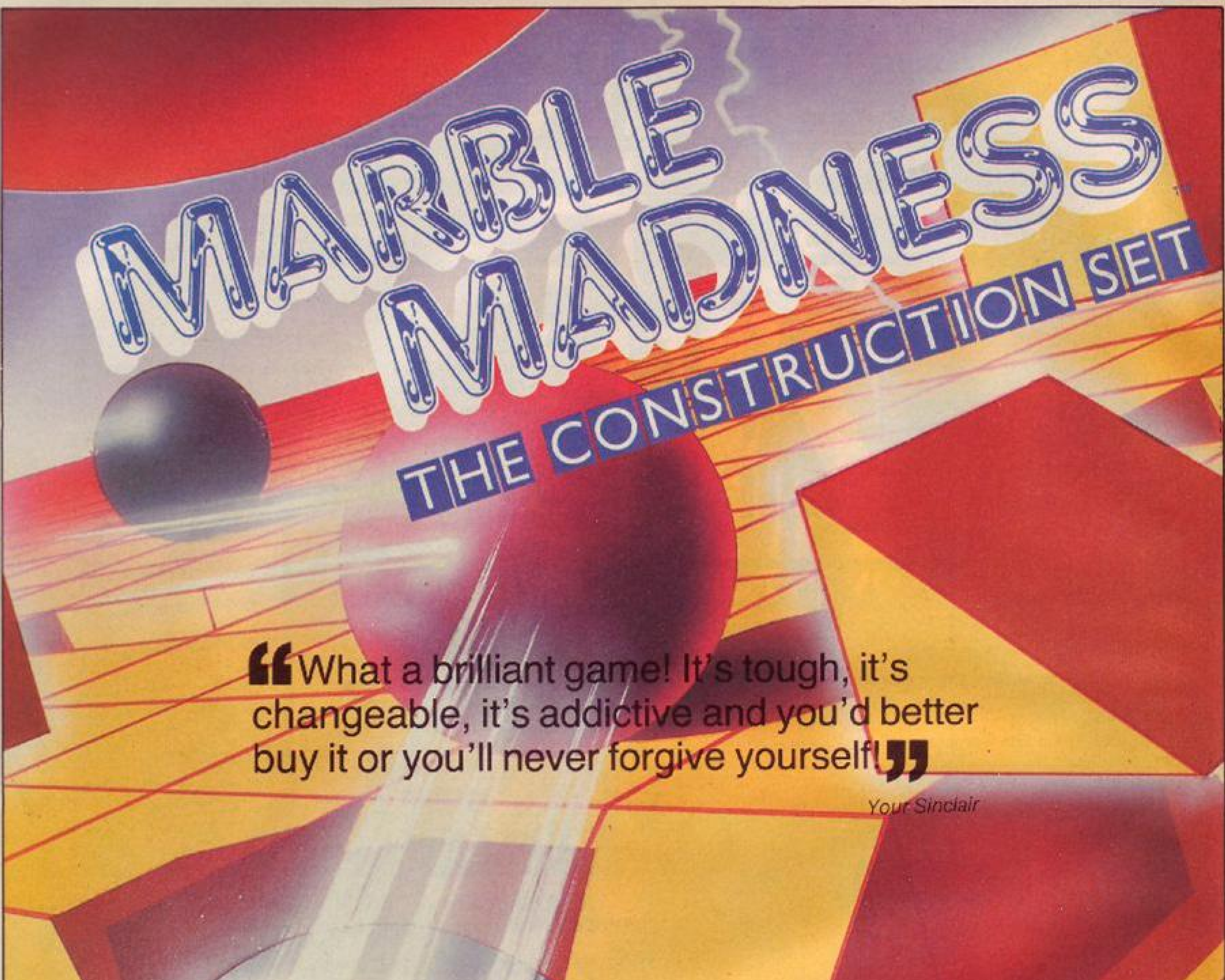
SERIOUS SIDE

SOFTWARE ● HARDWARE ● PROGRAMMING



INTERACTION

CREATED BY YOU AND FOR YOU



from **MELBOURNE HOUSE**

The Home of the Hits!

Melbourne House (Publishers) Ltd. Melbourne House, 60 High Street, Hampton Wick, Kingston-upon-Thames, Surrey KT1 4DB Telephone: (01) 943 3911 Telex: 935425 MELRSO G (01) 943 2688

EDITOR
Bob Wade

PRODUCTION EDITOR
Jim Nagel

TECHNICAL EDITOR
Richard Monteiro

ART EDITOR
Trevor Gilham

ASSISTANT ART EDITORS
Jane Toft
Kim Bale
Ollie Alderton

PUBLISHER
Chris Anderson

PRODUCTION ASSISTANT
Diane Tavener

SUBSCRIPTIONS
Carrie-Anne Porter

ADVERTISEMENTS
Gaye Collins
Eardley House
182 Campden Hill Road
London W8 7AS

Phone: 01-221 3592
Telex: 895 0811 OneoneG ref 130 49001

Amstrad Action
Future Publishing Limited
The Old Barn
Brunel Precinct
Somerton
Somerset
TA11 7PY

Phone: (0458) 74011
Prestel/Micronet mailbox: 045874011
Telecom Gold: 83 JNL272

Looking good for '87

The Amstrad CPC machines are entering the new year as strong as they've ever been. The games are better than ever, the serious software is more varied and interesting, and users are finding more and more things that the Amstrad can do.

This issue shows just what's possible when people put their minds to it. *Pagemaker* has appeared at last and it was really worth waiting for. It may well be the utility of the year. Anyone can now produce high-quality newsletters, magazines, documents – even magazine covers! Just to show what a versatile beast your Amstrad is there's also the *Music Machine* to turn it into a drum machine, sound-sampler, piano and all-round musical genius. With these two products you'll never have heard your machine look or sound better.

The Pilgrim is also having a bumper month with six pages packed with good things. As well as reviews he starts the programming feature in earnest and has a look back at last year's big adventures.

Your own contributions are still the most vibrant sections of the mag with all that enthusiasm bursting through. Reaction is packed with stimulating letters, Type-ins are more varied and interesting than ever, there's a fascinating Day in the Life account from a medical man, and Cheat Mode is chock-a-block with your pokes and playing tips.

On the games side there's *Starglider* as Mastergame and a competition to go with it, and a strong supporting cast including *Aliens* and *Space Harrier*.

Here at the Old Barn we're just gearing up for the Christmas celebrations as we go to press, so don't be surprised if next month there's evidence of a few hangovers. Here's to 1987 – let's hope it's as good to CPC users as 1986 was.

Bob

Colour Origination: Wessex Reproductions, 352a Wells Road, Bristol BS4 0QL
Printing: Redwood Web Offset, Yeomans Way, Trowbridge, Wilts.
Distribution: Seymour Press, 334 Brixton Road, London SW9 7AG.
(Distribution & subscriptions in the Netherlands: INFO-DATA COMPUTERS, Postbus 97, 3800AB, Amersfoort, Phone: 033-630187. Retail price: Hfl 7.90)



Tape tribulations

OK, OK we know *Doomdark's Revenge* wasn't on the cover cassette – that was Firebird's mistake – and we know the sound digitizer wasn't either, that was our mistake. Humble apologies. To cheer you up, we've got a little routine that will transfer the *Druid* demo to disk.

Have a formatted disk ready in the drive. Wind the Christmas Avalanche tape to the start of the *Druid* demo. Then type in direct mode (that is, don't use line numbers) the following. Press the Return or Enter key after each of the nine commands. This will transfer the demo to disk:

```
|TAPE.IN:MEMORY 4999
LOAD"DRUID"
SAVE"DRUID.BAS"
LOAD"FIRE.BIN"
SAVE"FIRE.BIN",B,&9000
   ,&322
LOAD"DRUIDSCR.BIN",&4000
SAVE"DRUIDSCR.BIN",B,&40
   00,&4000
LOAD"PLAY.BIN"
SAVE"PLAY.BIN",B,&2000
   ,&4BF0
```

No slashes

We have a new typesetting machine this month, which is still having teething problems – so please watch out for a couple of points. In program listings, be careful to spot the difference between the number zero and the letter O because we haven't been able to put the slash on the zeroes. Remember you will never find a letter O in a data statement.

Also watch out for any hash symbols (Shifted 3 key) that have printed as pound signs. We think we've spotted them all, but just in case...

CB comin' at ya

I'll bet you're all wondering who the mysterious CB is that appeared doing game reviews in the last issue. Well, I can reveal all. It's Chris Boothman, a local lad who will be doing game reviews for us from now on. Chris is 19, works as a computer operator and owns a 6128 with colour monitor.

Missing rave

Another one of those naughty Rave symbols went missing again last month. This time it slipped off *Back to Reality*.

Day in the Life

This month Dr Patrick Harkin has shot to stardom with his account of how he uses his 6128 both in his work as a pathologist and at play. If you think other readers will be interested in what you do with your Amstrad, whether it's unusual, at work or at play. Then get in contact with us and fame and fortune (well, a few crisp tenners actually) can be yours.

Hotline

Our phones are open from 2 to 6 on Monday afternoons for you to contact us with queries regarding Type-ins and Cheat Mode. Any other technical problems are best dealt with via letters because they frequently involve very long and complicated solutions which are time-consuming on the telephone. We'll do our best to cope with problems, but we're not a technical support service and our time is limited because we have a magazine to produce.



We are, THE MANAGEMENT

RE-ACTION
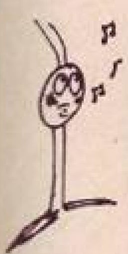
From the north and from the far south, readers again this month have kept the Old Barn's postman busy. We've even had a few on Prestel. Keep them coming!

Full marks for vice

Your December Action Test reviewed *Miami Vice*. It was given reasonable marks but the graph showed 100% on each section.

I have a hint for the Firebird game *Harvey Headbanger:* when you start you just go around the perimeter of the square anti-clockwise and you will trap the other person and get most of the cocktails.

Neil Curran
Devizes, Wilts



No, it wasn't that good. Toot was doing another late-night session, it seems.

Ind-X-rated

I have read your magazine since the first issue, and must compliment you on the quality of writing and the maturity of outlook displayed within your covers. You maintain a pleasing balance between the childish enthusiasm of some magazines and the dull stolidity of others.

I am not a computer owner but I constantly dream of what I will buy when I acquire sufficient funds. Computer magazines are therefore, for me, a form of pornography, feeding my idle fantasies, and AA has performed admirably in this role. Indeed my continued interest in the Amstrad as an object of desire can be largely attributed to the wit and intelligence of AA's reviews and articles.

There is, however, one glaring omission from your pages that you should take immediate steps to rectify. A source of so much valuable information as AA is bound to be used as a reference work. An essential item in any reference work is an index. When I finally possess an Amstrad I will constantly wish to refer to half-remembered articles, reviews, tips, pokes and programs. How am I to find them without painstaking search through a pile of magazines rapidly becoming dog-eared?

This simple addition would satisfy my scholarly mind and make perfect my enjoyment of AA.

Ian Fraser James
Whitstable, Kent

An index would be handy around the office too, when Bob Wade's brain isn't here to ask. One day. In the meantime faithful reader Julie Gilg of 9 Sylvan Ave, Exeter, EX4 6ES, keeps an index of games reviews (50p + stamp).

Nameless gremlin

I was playing Alligata's *Defend or Die* for about 10 minutes and was totally bored out of my skull, so decided to press all the keys at the same time and crash. Instead this is what came up on the screen:

"After the enterprise operating system even another Z80 machine even the CPC 46 bloody 4 is a relief. The prize for finding this hidden page is the height of your dreams with ... Gremlin's ... low-paid alternative to Tony Crowther. Hello to the South Manchester crowd at Ardwick Banff Road and Longford Place. I can often be found in the corner of the Whitworth Hotel and you are all welcome to drop in whenever you like and buy me as many pints of Pedigree as your bank manager will let you. Press enter to continue Borag Thung."

Hope this letter is helpful in tracking him down and buying him a pint.

Alan McGlaughlin
Glasgow

Methinks he had a little too much to drink already.

We're not so bad

I may have misjudged *Amstrad Action*. Issue 1 seemed to be all games reviews and, dare I say it, a bit childish, so I decided it was not for me.

But I chanced to encounter issue 15 and how you've changed! Useful articles and reviews and, praise be, interesting letter pages with editorial comments *only* when necessary. Are back issues available?

Enclosed is a bingo program as requested in Problem Attic.

Dorene Cox
Dagenham, Essex

I hesitate to reply to this one. Back copies of issues 3, 4 (with cassette), 5, 9, 10, 11, 12, 14, 15 and 16 and the cassette that was on issue 8 are plentiful. So are bingo progs! Send no more!

Tulip time

Here's a tip for all budding gardeners around the country. If you were wondering how your Arnold could help you grow your flowers, follow these instructions:

- Put your Arnold through the liquidizer and pour into saucepan.
- Add 500g of sugar. (664 owners may prefer to use the real thing.)
- Add one bottle of jelling agent.
- Bring to a rolling boil and pour into glass jars.
- Store jars until early February.
- Spread paste liberally around the place where you planted your bulbs.

Wait for a few weeks and – sure enough – your flowers will pop up from the ground, for everybody knows you get Tulips from Amstrad jam.

Daniel Homer
Michinhampton, Glos.

Barnum's time warp

It happens to every magazine in the end. What I mean is that your mag comes out nearly a month early. This might be good because we all get our favourite mag nice and early. It also means that the Christmas issue ends up being January. Most other mags keep it to December. (With the result that I sent you Christmas greetings early in time for the December issue. Do you keep those types of letters for the right issue?)

You could print two January issues, the Christmas one and a January special so the February issue would be in February. How about that?

I and many others are very anxious to get a copy of issue 1 or 2 (I want both). So as you have much Christmas cheer at the moment, could you next month, set aside a small column for anybody who has an issue 1 or 2, or anybody who wants a 1 or 2. Just a name and an address should do.



"THEY ONLY DATE IT LIKE THAT SO IT DOESN'T SEEM SO LONG TO WAIT FOR THE GAMES THEY ADVERTISE ..."

Which word-proc?

Hello, this is the Open Learning Centre in St Austell, Cornwall. Could you please advise me what is the best buy for the Amstrad machines in word-processing packages? I have a student wanting to know which computer system to buy. Thank you very much.

Richard Burridge
St Austell, Cornwall

I'd choose a CPC 6128 with Protext *on rom. The PCW would give you a printer but no possibility of colour or proper sound, and* Protext *is better than* Locoscript.

Users, unite!

I would like to inform fellow *Amstrad Action* readers of a new user group which I am running.

For a minimal subscription fee members receive a bi-monthly newsletter, access to a public-domain software library plus far too much mroe to list here.

If anyone is interested, please send me a stamp for full details.

Gary Carter
United Amstrad User Group
1 Magnolia Close
Fareham, Hants, PO14 1PX



Could you print my address in case anyone wants to contact me specially? I for one will purchase a 1 or 2 in almost any condition (all pages present, preferably).

Paul Nicholls
Hoddesdon, Herts

And happy new year in February. Personally I think the practice is in the same category as £9.99 pricetags. As for No.1, it's rare we hear of anybody wanting to part with one.

He's got it on his little list

If you're into lists you may be interested in this little lot from Phil Maxfield of Rotherham. You can contact him at his home address or phone number for more details.

Amstrad Program Guide: This guide is probably the most comprehensive available anywhere. It covers over 1100 programs and is constantly being updated. The guide indicates program type, cost on tape and disk, compatibility, plus an assessment where available.

Amstrad Chart: The best to the worst of Amstrad software. A compilation of all the leading magazine reviews for Amstrad software from September 1984 to date, including issues 1-16 of *Amstrad Action*. Covers reviews on over 600 programs and is updated weekly.

Infinite Lives Guide: An index of where to find infinite-lives pokes, maps, adventure tips and solutions. Covers over 150 games.

These programs are available on disk as data files running under *Masterfile*, or as hardcopy.

Phil Maxfield
40 The Brow, Brecks
Rotherham, S Yorkshire
S65 3HP Tel: (0709) 54 5055



"I'M AFRAID HE'S SUFFERING FROM WITHDRAWAL SYMPTOMS"

Index two

I'm sure many readers must feel as frustrated as I have in the past: you're stuck in a game and remember seeing something a few months ago but can't remember which issue, so you waste time hunting through back issues hoping to turn up something which will help.

I have spent a considerable time compiling a joint index of issues 3–15 of *Amstrad Action* and all issues up to and including December 1986 of *Amstrad Computer User*. The index covers some 500 commercial games, adventures and some educational software. It tells you where to find some 1,000 reviews, previews, pokes, clues, maps etc, and I believe it will prove an invaluable timesaver to any dedicated games-player.

Copies are available from me for £1 plus a large SAE.

Michael McFaul (subscriber!)
67 Belmont Church Road
Belfast, N. Ireland, BT4 3FG

Independent's best

Why is it that software houses who do not specialise in the Arnold seem to produce the best games for it? Amsoft produces diabolical games and yet it is part of the Amstrad company. Moreover most of its games cost £10. Mr Sugar may produce brilliant computers, but I think he's forgotten about the home users and games addicts.

And lastly a warning to everyone: do not buy a Trojan LP-1 lightpen. It works only every other time. Another thing Amstrad should work on.

All said and done Amstrad is the best and I'd like to thank Amstrad Action for a magazine that shows us how to get the most out of Arnold.

R Heaney
Edinburgh

You see why we're proud to call ourselves NOT an official Amstrad mag!

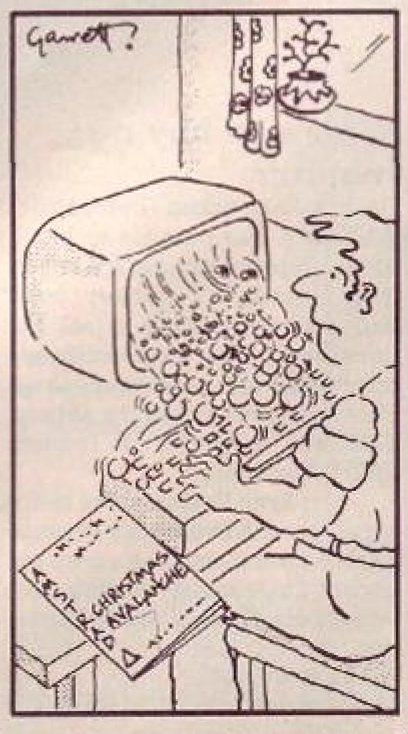
Moaning^3

I write this letter, bored out of my skull by an alternative Amstrad mag. I was recently reading the November AA. After several of the letters I researched other Re-action pages. I found many 'moaning letters,' of a different kind. These letters were sent by people moaning about people moaning! And what's more, now I've sent in this letter, other people will copy and start moaning!

So let that be an end to it. This mag is supposed to be light entertainment; let's not bog it down with moaning letters. Other than that, love your mag.

Adrian Lee
Norwich

There we have it. The final letter moaning about letters moaning about moaning letters.



Vintage stuff
During this period I was conned into joining the Amstrad User club, just in time to be sold down the river to Lazahold Ltd. My punishment for joining has been to receive a copy of *Amstrad Computer User* every month for the past year. My sentence is almost up, and when it is, no more *ACU*.

The only things I do not like about *Amstrad Action* is a certain tardiness in your order department and the binder. It is big, clumsy and capable of taking more than 12 magazines, so why not extra wires so each binder can be filled to capacity?

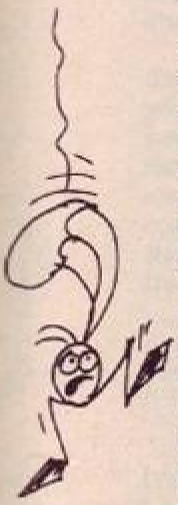
love your mag.

Adrian Lee
Norwich

Simulated to action
I am writing to get something off my chest which often niggles me about the presentation of flight simulators by some software publishers.

In any aircraft one pulls *back* on the joystick to raise the elevator and gain height. Conversely, to dive, push the stick forward.

The game which prompted me to dig out my WP is *Top Gun* from Ocean. Luckily, before I bought it I noticed the card inlay set out the joystick controls as up for up and down for down. This might seem sensible to many people, but for one used to flying aeroplanes (models, not the real thing!) it is very confusing. Trying to manoeuvre at low height in combat, it is too easy to end up pranging the plane by pulling back, instinctively thinking it will go up. (Mind you, that often happens to my models as well – pilot error.)



I still think *Fighter Pilot* (from Digital Integration) is the best flight simulator, and the joystick controls are round the right way.

Michael Anders
Gillingham, Kent

Where to buy no monitor
Derrick Kahn asked (Reaction 16) whether it was possible to buy a 6128 computer without a monitor. You replied, 'It's unlikely you'll find a retailer willing to sell the computer without monitor.' In my mum's mail-order catalogue, Great Universal, you can buy the 464 and 6128 with a monitor or (costing less) a modulator.

Mrs Lynn Davies (same issue) should think herself lucky because I haven't completed one adventure except for *Forest at World's End*, when I used a map and the solution.

Richard Nellist
Stockton-on-Tees, Cleveland

Points for Re-actors:
► PRINT your name clearly if you want us to spell it right. You should see some of the signatures we get!

► A telephone number might be useful in case we need to check something before printing your letter.

► Please don't expect individual replies, especially on games problems – we get just too many letters and would have no time left to put out your favourite mega-mag.

► If you have points for various departments (eg. Pilgrim, Type-ins, Subscriptions, Mail-order) please write them them on separate sheets of paper. Some members of the AA team are free-range – they are not confined to stalls in the Old Barn. So if you expect one bit of paper to be shared round, I'm afraid you multiply the chances of it getting lost. Make sure your name and address is on each, but you can post them all in one envelope.

Big game
I own a 6128 and have never seen a 128k game for it. And I'd like a penpal.

Robert Sturt (age 14)
17 Kings Park
Dereham, Norfolk, NR19 2AH

Try Meltdown from Alligata (£9 and £15), reviewed in issue 11, rating 67%.

Penpals, please
► **Bradley Joy, 11 Grangeway, Smallfield, Horley, Surrey, RH6 9LZ.**

► **Scott M'Ghie, 36 Nenbyres Crescent, Gorebridge, Midlothian, EH23 4UG**

Second opinion
We have read your unflattering report on our Screenvision (issue 16) and offer the following comments:

1. The illustration is not our Screenvision but that of a competitor, DK'tronics. If you did try this product and not ours it would explain the poor results. The DK'tronics model is filled with old technology and circular tuning, prevalent in television sets in the 1950s and 1960s. There are no controls for tone or colour, essential for user-preferred balance. The Screenvision uses up-to-the-minute technology with latest pushbutton preset tuning and manual override for volume, tone and colour.

2. Screenvision has been tested to British Standards in laboratory conditions and also in both high- and low-signal areas. It has also been tested with internal and external aerials. In all tests over a *three-month period* our Screenvision compared in every respect with purpose-built televisions.

3. We fail to understand your reporter's statement, 'Best to buy a television rather than go through this rigamarole.' He has missed the whole point of Screenvision. Amstrad owners will already have a monitor, and if not in use with the computer it has no other function. With Screenvision it is possible to give the monitor dual use as a television with a slightly bestter picture than a standard 625-line television set. Any television set needs to be tuned, and once tuned can be switched off and on as required with out retuning. It's the same for Screenvision. Plugging in and unplugging one simple cable is hardly a 'rigamarole'.

4. We fail to understand the comment 'Expensive for what it does'. The cheapest portable colour TV retails around £140 – twice the price of Screenvision. What television set at £140 also gives you composite and RGB output, hi-fi output etc, not to mention auxiliary power supply? Itis also possible to route Betamax and VHS video recorders to the computer monitor, something not possible with a standard TV set.

5. We do not agree Screenvision gives poor images. Images – for both purpose-made TV and Screenvision – are dependant on signal strength in the local area. Our showroom in Northwood, Middlesex, for example, is in a poor-signal area, surrounded by high trees; signal ghost comes in from transmitters at Crystal Palace and Chiltern TV. You are invited to call unannounced and see Screenvision in action on *various monitors* and alongside *various* portable TV sets. The pictgure received on the Amstrad colour monitor (once the tuner is correctly tuned) is as close to an oil painting as you will get. We use both internal and external aerials in the showroom.

6. Finally, we have sold just over 1,000 Screenvisions in the UK to date and have received many compliments on its performance. Over 3,000 sets have been exported (with Pal BG tuners) and many repeat orders made. It is unfortunate your viewer had such a low opinion of the product, but happily it will sell strongly on its merits. Screenvision will give many years of trouble-free enjoyment to the user. Should the owner sell his Amstrad almost all RGB (linear) and composite-video monitors are catered for in Screenvision. No other competitor product offers so much for so little.

N Sinclair-Miller
Screens Microcomputer Distribution
Northwood, Midx

Due to a production error the picture we printed was the wrong one – our apologies for that – but the review was of Screenvision. We feel the review wasn't as dismissive as you seem to think and would like to stress that for anyone owning an Amstrad monitor, but without easy access to a TV set, it is a reasonable purchase.



"I WONDER IF THEY'LL GET IT OUT ON TIME . . . "

Ears a tale
Following a thorough reading of AA 15 I tried one of the interesting-looking type-ins: 'Ears fo Arnold.' But I had to scrape around to find music to test the program with. My first selection turned out to be pretty rough. The label sai 'Motorhead.' This heavy metal wa strong stuff. On attempting to pla back this horrific noise the data corder head-butted the modulato

After this I tried some Sigu Sigue Sputnik. This made the FD start to pogo across the desk, an it ended up with a slipped dis By now all that was left was Arno and the monitor.

Well, it seems Des O'Conn doing a duet with Max Bygrav was the final straw. The smok started to pour out poor old Ar old's speaker, and the VDU wa showing all sorts of weird thing bringing a new meaning to th letters: very disturbing unit.

But all was not lost. All re spect was finally regained b playing a little Jean-Michel Jar to a rather battle-torn Arnold. A ter that I stuck to the patte programs. Full marks for Staine Glass – it's really ace.

Bruce Parks (?)
Wolverhampton, Staffs



Free registration to MicroLink in association with TELECOM GOLD
RS232C Serial Interface
ONLY £59.95 inc VAT
AMSTRAD RS232C Serial Interface
COMMSTAR II
AMSTRAD
AMSTRAD
V21/23 Modem by Pace
ONLY £99.95 inc VAT
V21/23 Modem
BY PACE
Free 1st quarters subscription to both *Prestel and *Micronet 800
AVAILABLE FROM AMSOFT USER CLUB TEL: 0783 673395
AND GOOD AMSTRAD COMPUTER STOCKISTS
PRESTEL
APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.
S/S IND S/2982/3/G/500472
micronet 800
* Micronet 800 is the trading style of Telemap Ltd. and British Telecom. Prestel and the Prestel symbol are trade marks of British Telecommunications.



Introducing Music Machine: The incredible new add-on that transforms the Amstrad into a powerful music computer.

A host of exciting musical features makes Music Machine the most complete Amstrad music package ever created.

There's sound sampling, the latest buzz-word in electronic music that lets you record and play any natural sound at different pitches. (Use the microphone to pick up anything from a whistle to a barking dog).

Eight 'voices' created entirely by Music Machine incl ing drums, piano and synthesiser – edit them, or create new o A powerful drum section with real sounds and a rhythm ed

And for budding composers, powerful professio features like note and tune editing, playable either f the Amstrad itself or a music keyboard.

Enthusiasts will appreciate the ability to link with o instruments via MIDI (the professional music interface)



HEARTLAND



Antipodean action

Thanks very much for the copy of the magazine. Remember the one? It took 72 days (10 weeks!) to reach me via surface mail! (The trouble with the Antipodes!) At the moment (14 Nov) only AA 10 is available, but I expect No 11 next week. There must be a considerable difference between sending 1 and 100!

Well, now you can see the problems of living on the other side of the world from where the action is! Enclosed is a copy of the inaugural newsletter of the recently formed Eastern Amstrad Users Group – membership first month: 30.

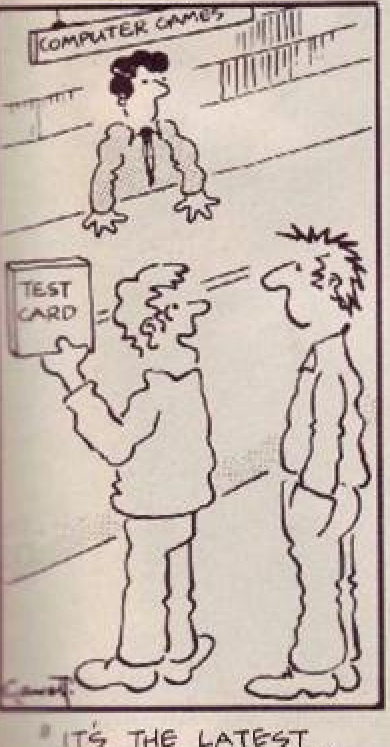
Todd Dixon
Eastern Amstrad Users Group
c/o PO box 6559
Wellesley St
Auckland, New Zealand

Moral issue

After reading Re-action and the software winner concerned about nuclear games, I started to read reviews and I was amazed to see a game that actively promoted the use of nuclear weapons. The game in question is *Nuclear Defence* (Amsoft).

I was quite disturbed that you could print both of these things in the same issue. You reply to Liam McMaster's letter that if the player uses nuclear weapons in the games mentioned he will lose the game eventually. This opposes the game *Nuclear Defence*, where you have to use these weapons actively to score points. Along with this I have to agree completely with Mr McMaster's points.

Mike Roberts
Stockport



"IT'S THE LATEST TELEVISION TIE-IN"

Disk doesn't fit deck

I was amazed when I found I was one of the winners of the Fighting Fit competition. I was quite pleased but there is one problem left. I have no disk drive. I have a 464 Arnold. Would anyone like to buy a disk from me?

And I agree with the letter in the December mag about an ads page.

I would like a penpal with an Amstrad CPC 464 user. Must live near Oxford. I like adventure games and arcade games. Penpal must be prepared to write a quick reply. Male or female, not worried.

Russell Franklin
Oxford

Anti-obliteration

To try to prevent obliteration of most of it, I will keep the number of words in this letter to a minimum.

What happened to the comps? / What happened to the subscription offers? / Why was Voice of the People changed? / Why do people keep leaving the ranks of such a great mag?

Short enough for you? / By the way, who was it that had the plug only halfway in when he was doing the *Starstrike II* review? It's supposed to be yellow!

Jonathan Hurst
Windlesham, Surrey

Competitions are still here – but we don't want to flood you with cheap easy-to-produce pages that give no information or entertainment to the vast majority of readers. / See last month's issue. / Lack of response. / People who work for AA are always in demand!

Good. / Colour pages are transferred onto four sheets of film, each providing part of the colour. When mixed together they create the final colours. On the Starstrike II *review one layer got lost and hence the printed screenshots were the wrong colour. Try as we may, these things happen.*

Software in Surrey

I am a freelance programmer currently doing conversion work for a top software house. I would like to get in touch with anyone who lives not a million miles away from Surbiton – call me anytime during the day – who is interested in programming or graphics design on the CPC range or Sinclair Spectrums. I am looking for one person capable of contributing to top-quality games software, eventually for an entire programming team to start up a software house.

Paul Machacek
Surbiton, Surrey (tel. 01-398 3145)

REMove the problem

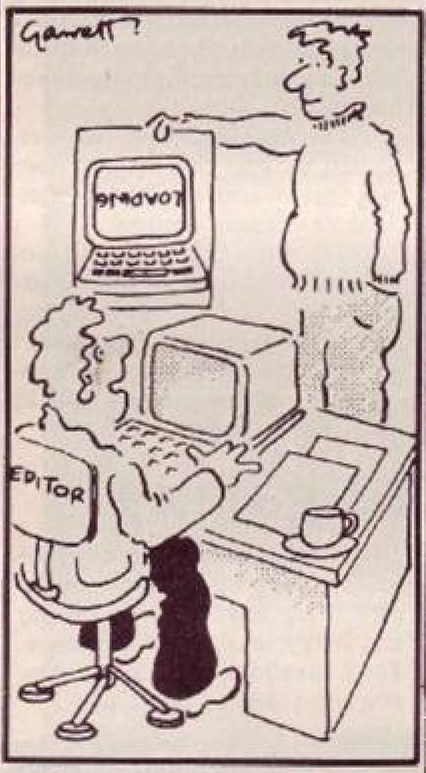
Anthony Beck in issue 15 complained about foreign loaders. I think I may be able to help him.

I also own a 6128 with separate tape recorder, and when I bought *Harvey Headbanger* I couldn't get it to work. I tried on different volumes but no luck. The azimuth setting was correct; we had it professionally adjusted. *Spiky Harold, Star Firebirds* and *Thrust* – none of them would load. I realised the tapes were not faulty; they just wouldn't work on my recorder. However, they would on my friend's computer.

Then, after lots of Firebirdless months, the breakthrough came. While visiting my friend, I noticed he didn't have his REM lead attached to his recorder. I tried this with mine and – yes! – the games loaded!

So, Anthony, I advise you to remove your remote-control lead from the recorder and load games on just below a third volume. If your other game tapes all load, I think your azimuth setting should be okay.

Daniel Webster
Buckingham, Bucks



"IS THAT REALLY THE BEST AUSTRALIAN CARTOON YOU CAN COME UP WITH?"

Black hole in Brentwood

I think Amstrad Action is the best computing magazine in existence. Unfortunately I cannot use the type-ins, cheat mode or hot tips sections. Why? Well, over nine weeks ago my 6128 ceased to operate. I had to send it back to Amstrad. Since that fateful day I have heard nothing about its location. I think that Amstrad's after-sales service is absolutely appalling.

When I get it back I hope to type in *all* the type-ins I have missed – three issues' worth.

While I'm at it, please can you tell me if it is possible to use keys at *Tobruk 1942*? Keep up the good work, team, and more disk pokes, please!

David Giles
Wokingham, Berks

We hope Santa Alan had a nice Christmas surprise for you, David. (And yes, Torbruk can be played with keys.)

Mail-order Joyce

I am one of the hordes of American GIs stationed in your wonderful country. Out of 22 years with the USAF I have spent 17 in England and plan on retiring here shortly. So when it came to buying a home computer in March I chose the Amstrad 6128 over the Commodore 128. I have worked with both machines and prefer the Amstrad. Unfortunately most of my colleagues are into Apples, Ataris or Commodores and know very little about the Amstrad. But that is about to change very shortly.

Sears Roebuck is the biggest mail-order company in the USA, selling everything from shoes to lawnmowers – and a small line of computers. Any town of consequence also has at least one Sears department store. Sears is as American as apple pie and baseball. So products sold by Sears sell in *vast* quantities.

The enclosed item – the Amstrad PCW 8256 'new at Sears' for 'incredible value' $699.99 – was taken from the pre-winter sale catalogue.

KE Irvine
South Cerney, Glos

Congratulations, Joyce. Thanks for sending in this snippet, KE. Fascinating that when American products sell here, the price in pounds is the same figure as it was in dollars. Somehow it's cheaper exporting westward, it seems.



Oscar for Arnold

There seem now to be celebrity Amstrads: the one on *Eastenders* in Colin's flat, the one that keeps appearing on *The Price is Right* and *Play your Cards Right*. Do they pay dues to the actors union? There are also the ones in the ads: the famous 464, the quick-thinking 6128 and the word-processing Amstrads that send typewriters to the junkheap.

Are we soon to see Benny in *Crossroads* taken over by a 664? Or the entire *Dynasty* cast replaced by an Amstrad joystick? Or Dirty Den becoming Dirty 6128 with colour monitor who keeps running off with an Amstrad dot-matrix printer?

Bambi the Punk
Sheffield

Deirdre Barlow

AMSCENE

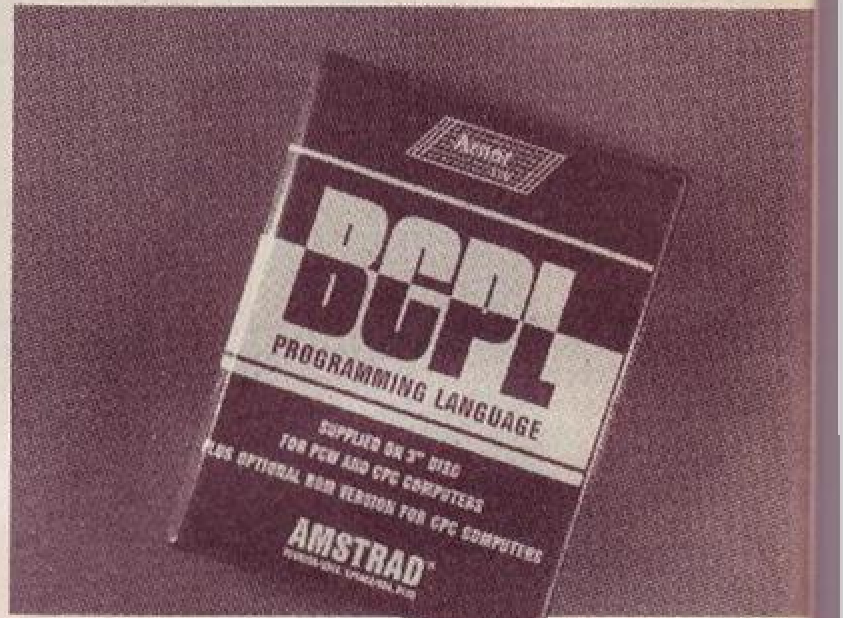
BCPL ready

Arnor, famous for the *Maxam* assembler and *Protext* word processor, has completed BCPL.

BCPL is often referred to as a 'systems programming language'. It is certainly good for writing programs such as word-processors and compilers, but it is also an excellent general purpose language.

Basic and Pascal have several different variable types, for example strings and integers. BCPL on the other hand is no[t] constrained by these rules – al[l] variables are simple numbers. This, and the fact that BCPL ca[n] access any part of memory, give[s] it a great flexibility.

For £40 you recieve a dis[k] containing BCPL and a few example programs; thrown in for fre[e] is a rom also containg BCPL.



Matrix



ASL or Audiogenic Software Ltd has just finished *Matrix*, a comprehensive spreadsheet.

Matrix gains over standard spreadsheets in that it can handle business presentation, database and invoices – even standard letters.

The specification shows built-in database features that allow data, such as name-and-address files, to be stored in rows across the spreadsheet, and then merged along with numerical data from the sheet into a document in the Notebook.

The Notebook features text-editing facilities that make it easy to prepare address labels, standard letters and invoices.

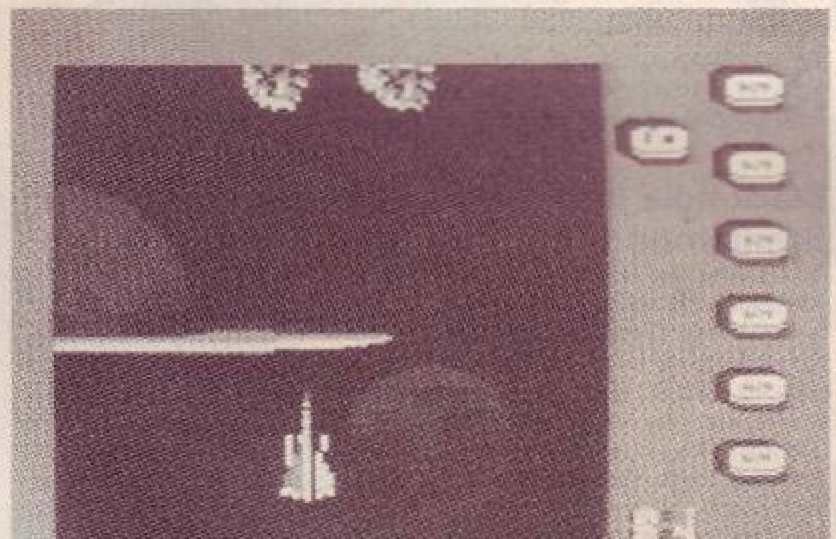
There is a graph-plotting facility that lets you convert spreadsheet data into line graphs, bar graphs, histograms or pie-charts.

It certainly sounds impressive, and at £30 on cassette and £35 on disk it will need to be.

The blasted galaxy

Another shoot-em-up, *Trap*. This one from Alligata is by Tony Crowther.

The time: 'an age in which the ultimate deterrent may have become the ultimate destruction.' The place: 'a distant corner of the galaxy where human life strains to exist.' Your mision: blow anything and everything out of existence. You'll have to blow £8.95 on cassette and £14.95 on disk.



Back to life

CRL seems to have sprung into action recently, producing many new titles. Late January and February will see the release of three more.

Ball Breaker appears to be an enhanced version of the classic *Breakout*. The player controls a bat which hurls a ball against a brick wall. Bricks of different colours cause the ball to react in different ways – some cause the ball to change speed; others may even break the ball in two. This will set you back £7.95 on cassette and £14.95 on disk.

Cyborg is part one of a trilogy continuing the *Tau Ceti* theme and using the 3D techniques developed for the original *Tau Ceti*.

The final in CRL's threesome is *Death or Glory*, another in the seemingly endless line of shoot-em-ups. Both *Cyborg* and *Death or Glory* retail at £8.95 on tape and £14.95 on disk.



Imagine hat-trick

The larger software houses seem to release games in threes just lately. Imagine, not wishing to be left out, is bringing out two sports simulations and a shoot-em-up.

First on line is *Konami's Golf* which allows you to select a club and tee-off. Stroke or match play can be chosen with differing terrain and conditions.

Super Soccer is the other sports game from Imagine. According to the press release, it 'makes you Maradona on screen.' You are given complete control over the ball: sharpshooting, passing, dribbling, sliding tackles and even diving headers.

Other features include full-team organisation and one or two players, with a tournament option for up to eight players.

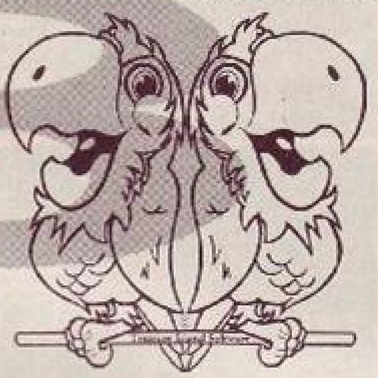
Terra Cresta, a coin-op conversion, is a shoot-em-up which was pretty furious in the arcades. Homing missiles, giant monsters and a myriad of other aliens are there to be dodged or blasted. All games sell for £8.95 on cassette and £14.95 on disk.

Pieces of eight

Parrotry from Treasure Island Software may conjure up images of swashbuckling pirates, but this couldn't be further from the truth.

Parrotry is a versatile drawing and design program for Amstrad owners with a disk drive. It differs fundamentally from most graphics programs by storing its display in the form of a graphics array instead of the usual screen. The result is that the program redraws the design as it was drawn by the user – mimics the artist's work parrot-fashion – at high speed.

Included in the package is a booklet and a competition entry form: the designer of the best display using *Parrotry* could find a healthy £500 added to her or his bank balance. *Parrotry* is available on disk at £13. More information can be obtained on (0525) 40 5621.





Kiaeyyye & other noises

Melbourne House has been very quiet the past few months. It is now back with two £9.95 games to come your way shortly.

Fist II is set in a dark land of swamps, forests, mountains and underground caverns. The enemy comes in many forms with ninjas, shoguns and warriors in abundance. Sounds as though the animals want a piece of the action; they are prone to taking a slice of you with them.

Knucklebusters promises much. There is to be music throughout the game – an incredible 17 minutes before repeating. The music is by the masterly Rob Hubbard – remember *Monty on the Run*?

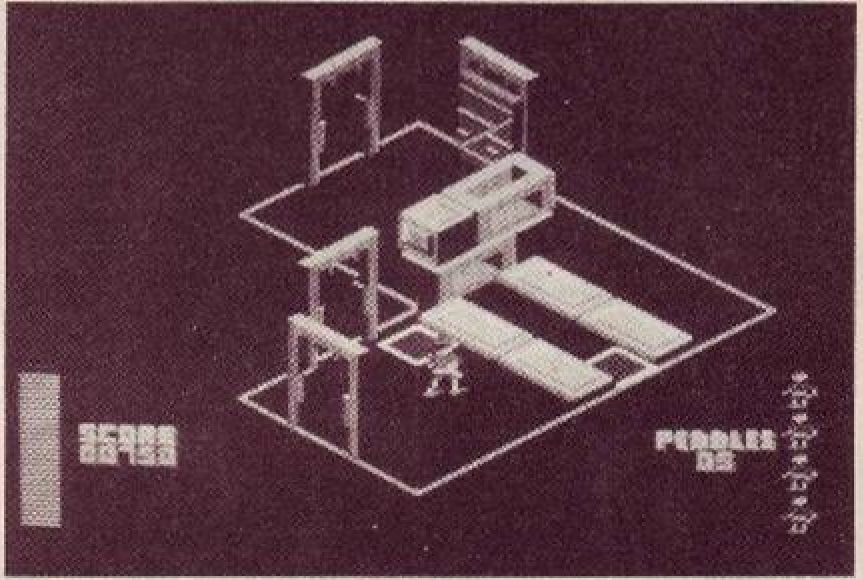
The setting is in the near future, where condemned prisoners are stripped of their anti-social behaviour by being transformed into androids. You play an escapee, trying to get to the city perimeter. Wherever you go, androids programmed in unarmed combat will bar your way. Let's hope it lives up to the press release.

Ariola's little lot

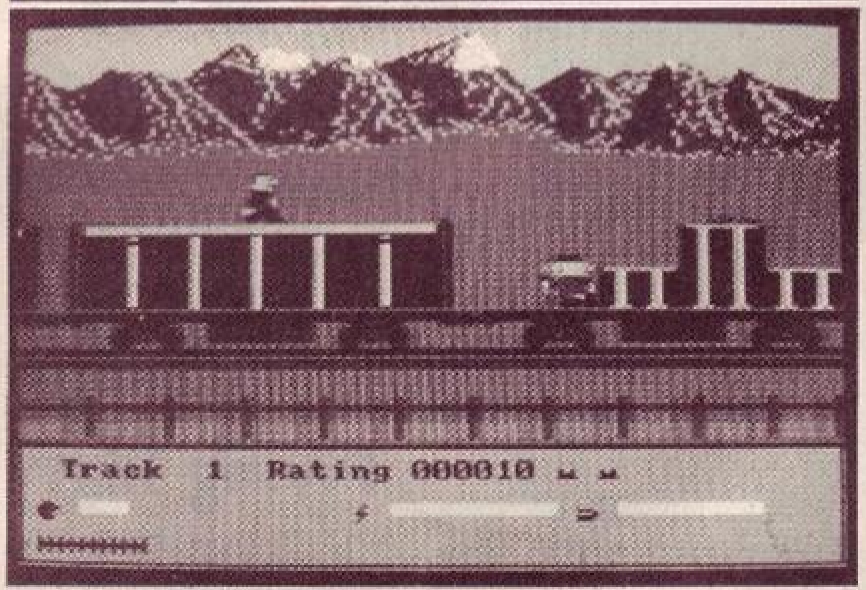
Ariolasoft seems to be producing some top-quality software of late. Always on the trot, it has a few more programs up its sleeve.

Ziggurat, which is set for imminent release at £8.95 on cassette and £14.95 on disk, looks rather interesting. The idea is simple: search for lost treasure within the Temple of Djo Carz.

According to the story line: 'Terrible legends tell of the horrors locked within the Temple – Mimbies, evil manic beings who roam its labyrinth, and who take over your own ghost to make them one of their kind.' A mimbie is a cross between a mummy and a zombie.



Mountie Mick's Death Ride is another of Ariola's offerings. From what we gather, it's cops-and-robbers time. There is a twist, though: you play the bad guy. It promises to be a fast and furious shoot-out, retailing at £9.95 and £14.95 on cassette and disk.



'Your mission is to battle your way through the extraordinary Cube prison and resuce a prisoner. He alone knows the secret of how to activate the Triad's devastating new weapon.' There you have it, the intro to *Triaxos*. From the screenshots we have, it looks interesting, with multi-coloured three-dimensional rooms. There are promises of greater things still, with multi-channel music and icon-driven graphics. All this for £8.95 on cassette and £14.95 on disk.

Two From Gremlin

Back in October we reviewed the *Electronic Music Utility* (EMU), which is sold on the Discovery label. However, there was a problem with switching voices to edit them. The problem seems to be resolved, so you can expect to see *EMU* in the shops shortly.

Another on the Discovery label is *Pyraword*, a word-processor allowing a workspace of over 30,000 characters, all of which can be edited or chained together for printing. Both these packages will retail at £14.95 cassette and £17.95 disk.



Going cheap

Codemasters, responsible for the highly acclaimed *Terra Cognita*, has two new programs about to hit your Amstrad: *Vampire* and *Super Robin Hood*, both retailing at £1.99 on cassette only.



More Trivial Pursuit

Domark is releasing another set of questions for its computer version of the trivia board game. It's called the *Young Players Edition* and is aimed at children from age seven up. It comes in two forms: either just as a new set of 3,000 questions (£7.95 on cassette) that adds on to the original Genus edition, or as a complete game (£14.95 cassette or £19.95 disk).

Classics are back

The ageing arcade classic *Donkey Kong* has made it to your Amstrad screen. Ocean can be thanked for the conversion; it costs £8.95 on cassette and £14.95 on disk.

The basic idea is to outwit giant gorilla and rescue fair damsel. While climbing girders, the ape will try his hardest to knock you from your perch by throwing barrels. Practise your jumping and ducking – you'll need it.

For starters

Pride, best known for its tape and disk utilities, has produced the *Electric Lantern Show*.

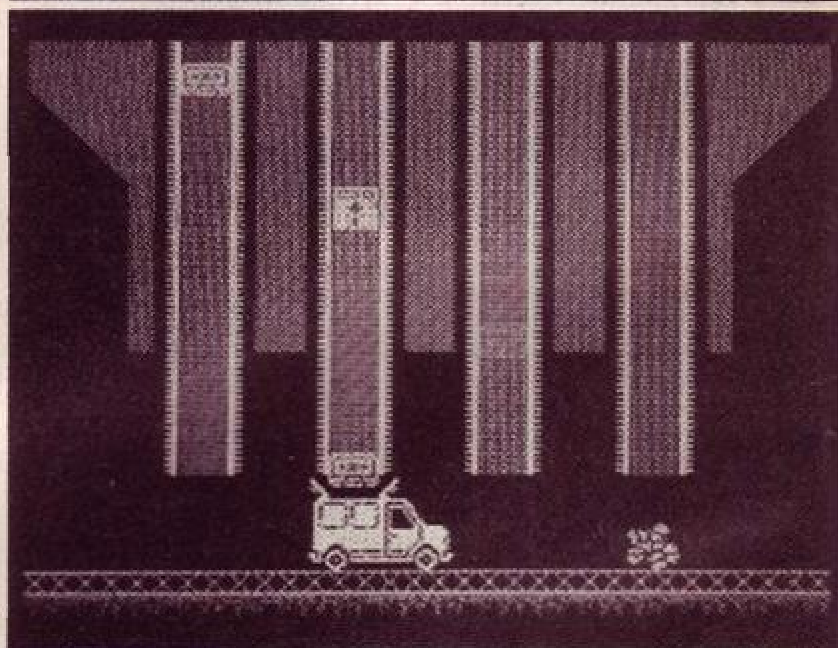
With it the user can produce full-size and even poster-sized printer dumps. The supplied disk contains 28 eight-colour pictures; these can be edited and compressed – alternatively, your own can be altered.

To date we have no firm price, but further details can be obtained directly from Pride on (0582) 41 1686.

Pressing software

Argus Press expects to release several new games in the first two months of 1987.

Wibstars, on the A'n'F label, places you in the hot spot. You must run a distribution company – get the goods to the customer on time or pay the consequences. The action is in three parts: around the warehouse, a race to the shop, and finally delivery using an antiquated lift system. The price is £8.95.



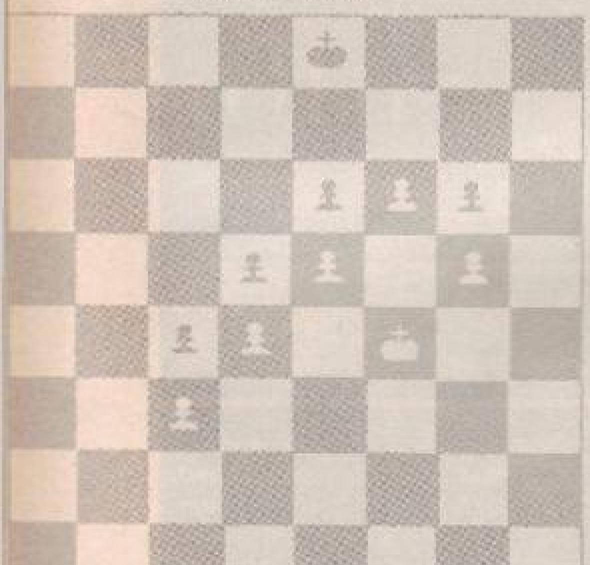
The second A'n'F program is *Agent Orange*, a good old shoot-em-up. 'In the far corners of the galaxy a colony of...' and basically, it sounds as though you have to blast them from the skies. Another £8.95 game.



Programming at sea

If you are into chess, connect 4 and 'C' programming then Hisoft may have the perfect answer for you, *SeaChest*.

SeaChest is available only for CP/M Plus users (that is, 6128 or PCW owners) with £30 in pocket. Fully-fledged versions of chess and connect 4 are on the supplied disk, which can be played immediately. Or, if you wish to alter the game programs' logic, there is the complete sourcecode for the language 'C' waiting for you to practise on.



Flying high

After massive success on other computers, *ACE*, a flying simulator, is to be converted to the Amstrad. Cascade Games promises a quick delivery – let's hope so, for it sounds exciting. The speed and smoothness is supposed to exceed previous simulators, but we'll have to wait and see.

Magnificent Master

Mastertronic, constantly striving to produce games as cheaply as possible, has another ace up its sleeve.

A set of three disks, each containing three of Mastertronics' past successes, will reach the stores soon. No definite price has been set, but they will be between £11 and £13.

One disk contains *The Golden Talisman, The Apprentice* and *Speed King*; another has *Con-Quest, Storm* and *Formula 1 Simulator*. The final disk will have *The Last V8, Molecule Man* and *Pipeline II*.

What's so special about the Mac, the Atari St, the Amiga, Windows and Gem?



It's no surprise that nearly all new 16 bit 'state of the art' micros now come with a Mouse and Wimp environment (Windows, Icons, Menus and Pointers) as standard.

With the AMSTRAD CPC you already own one of the classic micros and by simply adding AMX software you can achieve the same ease of use, freedom and versatility of much more sophisticated computers.

The AMX Mouse and compatible software – it's what you and your AMSTRAD micro have been missing.

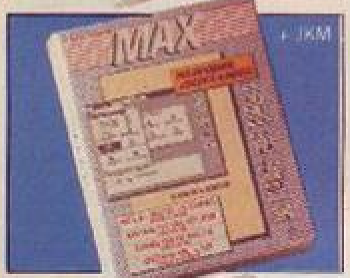


ART AND MOUSE OPERATING SYSTEM

AMX MOUSE PACKAGE Tape and 3" Disc **£69.95**

There's not much joy in a joystick and keyboards can be all fingers and thumbs. Acclaimed by the press as 'the best input device', already over 50,000 micro users have adopted an AMX Mouse. The Mouse comes with fantastic Art Software and AMX control which enables you to create a Mouse environment in your own programs. Available for Amstrad CPC 464, 664, 6128.

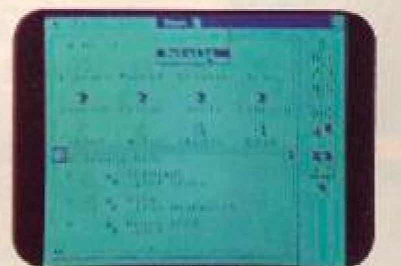




GRAPHIC DFS FRONT END

MAX 3" Disc **£19.95**

MAX provides an easy to use graphic based front end to your computer's disc filing system including a comprehensive set of disc management operations such as cataloging, copying, deleting and re-naming, also included are disc utilities such as sector editing, recovering erased files, formatting, verifying and faster tracking. You can also run programs from within MAX. Available for Amstrad CPC, 464, 664, 6128.



BBC VERSION



DESKTOP PUBLISHING

AMX PAGEMAKER 3" Disc **£49.95**

Produce professional documents and newspapers with text and graphics, supplied with 16 variable typefaces it has many graphic functions including cut, copy, paste, etc. Available Now.



EXTRA! EXTRA! 3" Disc **£24.95**

300K fantastic clip art, over 25 fonts.
Available February 1987. For use with the Amstrad CPC 6128, CPC 664 (+ 64K min add on Ram), CPC 464 (+ 64K min add on Ram + Disc Drive)



AMX MAGAZINE MAKER 3" Disc **£129.95**

A combination of AMX Pagemaker and the Rombo Vidi-Video digitiser. Using any video and the digitiser, images from a camera or TV can be converted into a graphics screen with Pagemaker to illustrate magazines or newsletters.



There is also a growing list of AMX support software including: AMX 3D Zicon (3" Disc) **£24.95** with Zicon you can transform vector data into on screen graphics. Printers and plotters are fully supported, AMX Utilities (3" Disc) **£19.95**. Utility software for the original art program supplied with the AMX Mouse. A Mouse and interface (only) can be purchased for **£34.95** direct from AMS using the order form enclosed in MAX, AMX Pagemaker and AMX 3D Zicon. These superb products are available from all good computer dealers or direct by cheque, Access or Visa. All prices include VAT and post and packaging.

FOR INSTANT ACCESS/VISA ORDERS TELEPHONE (0925) 413501/2/3

AMX SOFTWARE

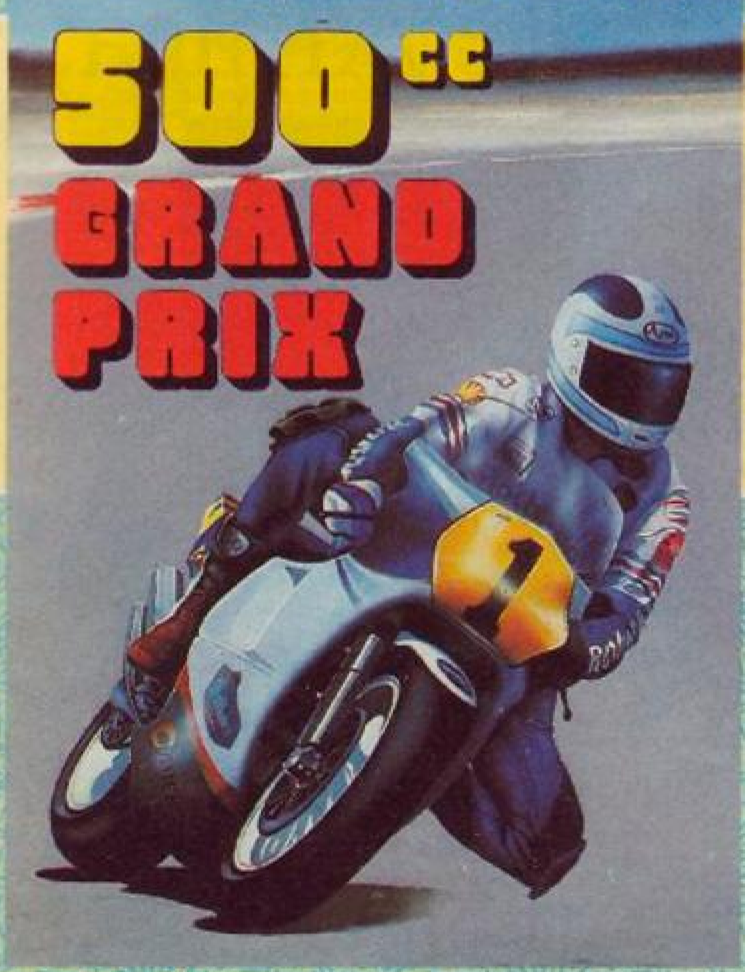
IMAGINATION AT YOUR FINGERTIPS.

+ JKM
ALL THESE PROGRAMS WORK WITH JOYSTICK KEYBOARD OR MOUSE

ADVANCED MEMORY SYSTEMS LTD. 166/170 WILDERSPOOL CAUSEWAY, WARRINGTON, WA4 6QA. TELEX 628672 AMSG. FAX 0925 58039.

TUBELINK ON PRESTEL PAGE 2582182 SUPPORTS THE AMX MOUSE AND ALL AMS SOFTWARE.

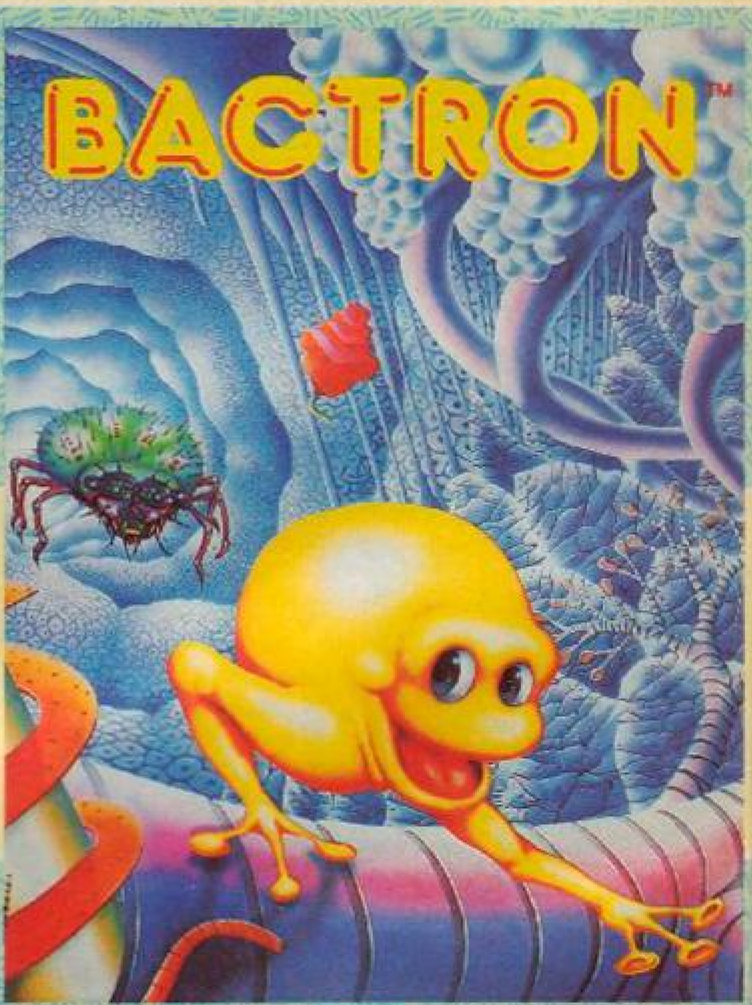
NEW from Loriciels



Enter into the exciting and dangerous world of the International Motorcycle Racing Championship with this superb simulation featuring a major circuit from each of 12 countries and split screen graphics, giving both players first person perspective.

Available on Amstrad CPC Cassette – £9.99
Amstrad CPC Disk – £14.99
Coming soon for Commodore 64/128, Atari ST and IBM computers.







The very first antibiotic software. Bactron is very addictive, it could become a drug; do not exceed the stated dose. Guide Bactron through the maze of organs and arteries in the body, combating harmful bacteria and viruses by releasing healing enzymes.

Available on Amstrad CPC Cassette – £9.99
Amstrad CPC Disk – £14.99



Control MGT – A jet powered magnetic tank – through a weird and frozen world of puzzles and surprises.
"The graphics are brilliant...very atmospheric"
"A great game...I could play for hours"
"The puzzles are ingenious"
– AMTIX!

Available on Amstrad CPC Cassette – £9.99
Amstrad CPC Disk – £14.99
Coming soon for Atari ST



MAIL ORDER: ACTIVISION (UK) LTD.,
23 POND STREET, HAMPSTEAD,
LONDON NW3 2PN

loriciels

Distributed by Activision (UK) Ltd.


SUGARMAN
NEW YEAR'S EVE... BROTHERS! THE SITUATION IS GRAVE!
BUT WE...
...THE BLACK SONS OF THE CPC...
SHALL RETALIATE!
LET US RECITE OUR CODE!
CUT OFF AN ARM...
IT SHALL GROW ANEW!
CUT OFF A LEG...
TEN SHALL TAKE ITS PLACE!
CUT OFF A FOOT...
IT SHALL KICK YOU IN THE TEETH!
SOFTWARE SALES HAVE FALLEN, BROTHERS!
SOME SOFTWARE HOUSES DEEM OUR BELOVED MACHINES TO BE INVIABLE SOFTWARE OUTLETS!
I, THE SUPREME SON, HAVE SUSSED THAT IT IS A PLOY BY SUGAR TO PROMOTE SALES OF THE DREADED PC1512!
WE MUST MAKE HIM PAY!
I WILL SEND IN... THE HACKER!
THE HACKER?!!
YOU CAN'T USE THE HACKER!
CRIPES! NOT HIM!
IT'S INHUMAN!
GUY'S A PSYCHO!
HE'S UGLY, TOO!
HELLO, FANS!
HACKER! BUDDY!
HOW YA DOIN' HACK?
GOOD TO SEE YA, PAL!
WOW, IS THAT THE TIME? I GOTTA GET HOME...
AT THE SUGAR MANSION...
PRIVATE 664 USERS WILL BE PROSECUTED
...LEST AULD AQUAINTANCE BE FORGOT...
...LET OLD COMPUTERS BE FORGOT...
SUDDENLY...
KROOM!
EEK!
YIKE!
GATECRASHER!
SUGAR!
MY GOD! HE'S AFTER ALAN!
DON'T PANIC!
MAYBE HE'S JUST A DIABETIC HAVING A HYPO!
LOOK, FOLKS...
I KNOW I SAID TO INVITE YOUR FRIENDS,
KILL!
BUT WHOEVER THIS GUY IS WITH...
HAS NO CLASS.
WHOOSH!
AK!
KRUDA!
TAKE THAT!
AND THAT!
THUK!
AT THAT MOMENT...
BONG BONG BONG
BONG BONG
YAROO!
MIDNIGHT!
IT'S 1987!
HUH?
WHA?
HEY! HAPPY NEW YEAR!
LIKEWISE I'M SURE!
HAVE A HAPPY AND PROSPEROUS NEW YEAR, EVERYONE!
YAH! DONT KILL NOBODY!
NOW, WHERE WERE WE...?
PAF!
BY J. SARKAR

The Music Machine

Ram Electronics, £49.95 tape, £59.95 disk

Ram Electronics (Fleet) Ltd
Unit 16, Rodfields Industrial Park,
Redfield Lane, Church
Crookham, Aldershot, Hants,
GU13 0RE ☎ (0252) 85 0085

THE BEAT MAST

Richard Monteiro pulverizes his ears with the latest musical hardware that will have you bopping, grooving and strutting your funky stuff

Drum machine! Sound sampler! Piano! Echo and reverb chamber! Music composer! Midi interface! No, I'm not a budding pop-star showing off his Saturday shopping list. These are but a few of the exciting and exuberant features available on the latest add-on for your Amstrad, The Music Machine. Ram's ad is no idle boast: 'an Amstrad like you've never heard it before.'

The Music Machine's compact appearance conceals much. Why buy several single-purpose products? Ram's offering has it all – well, nearly.

A smallish box encloses all the components necessary to turn Arnold into a fairly complex music maker. It connects to your Amstrad by a length of ribbon cable which negates the need for different shaped boxes for the different Amstrad models.

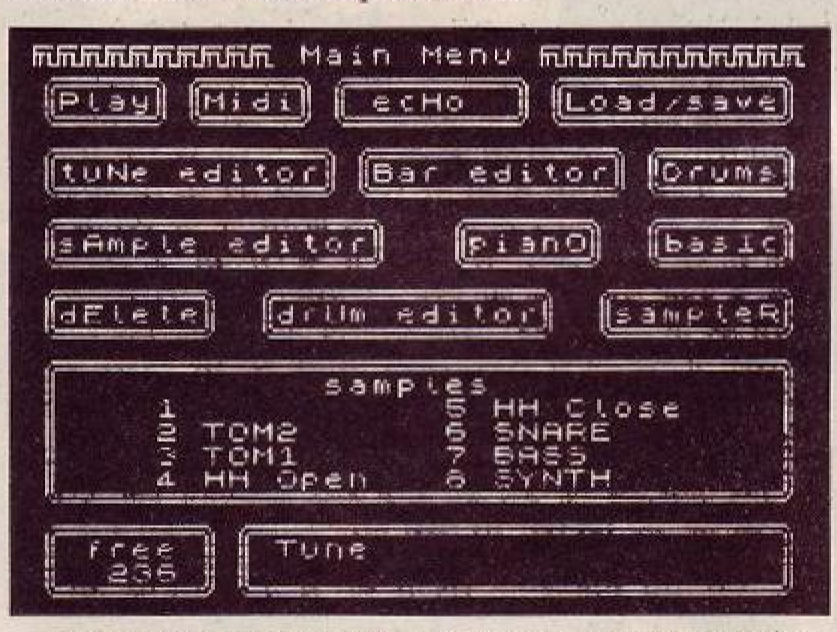
But what is this? No through-port for me to connect the disk drive (loud scream). Okay, not everyone has a 464 with disk drive, but for those that do, tough! You will have to load software from cassette.

There may not be a through-connector, but it is some consolation to see a 'spaghetti junction' of plugs and sockets on one side of the Music Machine: Midi in, out and through connectors as well as headphone, microphone and audio-out sockets – something for everyone (bar 464 owners with disk drives).

The package includes a microphone. It gives admirable results, but you can use a better-quality one. An excellent instruction manual details setup procedure, software use and adds a small section for the boffins. Its lively, chatty manner makes compelling reading. Don't shy away from it – read it rather than plunging headfirst into the program.

Now that you know what it looks like and have a general outline of what it can do, here is an in-depth look at the various features and feats that can be achieved using the supplied software.

Once the software has loaded, a screen flickers on, presenting itself as the main menu. Some selections from here take you to a sub-menu and then to the required feature.



The first thing I tried was **Play**. This supposedly lets you listen to the tune highlighted in the Tune box. Snag number two: the only thing audible was a horrible beepy melody (Ram's word, not mine!) My dreams shattered, promises of sampled drum sounds... just a lie? After another brief scan through the manual (I shouldn't skip the small print), I was enlightened. Either sampled sounds or sound created by the Amstrads sound chip (PSG) can be produced through the internal speaker – no mixing of the two. If you wish to listen to both sounds simultaneously then either connect a wire from the Audio socket to an amplifier or – a less ideal method – plug headphones into the Music Machine. You will now hear the sampled sounds from one quarter and the PSG sounds from another – that's what I did; it worked fine.

Listening to those sampled drum sounds for the first time was breathtaking, nothing short of brilliant. You could swear it was the real thing. It's still a little unbelievable everytime I hear them. One thing to beware is that the drum sounds are kept in memory (and take up virtually all of it). If you wish to sample any of your own sounds, you'll need to clear some memory.

With the drum sounds still in memory, it's a good idea to try out **Drums**. This option draws up eight octagons containing a number or letter, corresponding to the keyboard. Pressing these keys will produce one of the drum sounds – come here if you wish to practise those rolls and para-diddles.

To sample some of your own sounds, in goes the microphone you choose **sampler**. A bar shows, representing the sound level. Shouting down the mike will cause it to shoot up. Pressing the 'Trigger', will record all the following sounds into memory. This can be anything from slapping your baby brother around to blowing raspberries. Virtually any sound can be captured. There is a limit to the length of a sample, however, determined by free memory space. In practice the longest single sample can be 1.1 seconds. This may not seem earth-shattering. But when you consider that each drum sound takes only a tenth of a second, you realize that marvellous results can be achieved. Up to eight separate samples can be taken. Of course if one of your samples takes over half a second, it goes without saying that the other samples will have to be pretty darn short.

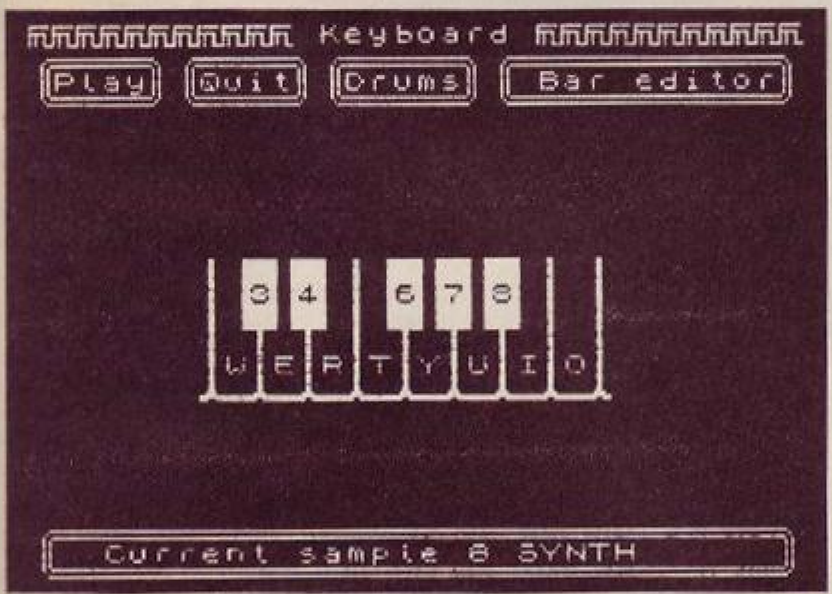
You've recorded the sound; it's time to play it back. This is where you get a shock. Reproduction is near perfect, almost as good as a cassette recording. If you get lots of hiss or background static, then choose the **sample editor** and remove any unwanted bits. It is even possible to play the sample backwards, which can be entertaining.

On selecting **piano** from the main menu, your Amstrad keyboard (or rather part of it) behaves as a simple monophonic synthesizer (that is, only one note can be played at a time). It's a shame that you have only one octave (12 notes), rising from middle C, to play with. From here you can choose any of the samples to play on the keyboard; for fun try listening to your voice at a very high pitch.

The **echo** option sets up reverberation effects with a simple

ER





variable delay line ranging from 0 through to 1.5 seconds. The length of the delay also depends on free memory space; if you have lots of samples then I'm afraid only short delays can be put into effect. Using headphones while speaking through the mike can be hilarious; it's almost possible to hold a conversation with yourself. Or try directing output to an external amplifer which in turn has speakers attached – startling. So you want feedback? Turn up the volume – loud.

So far I have looked at getting enjoyment and entertaining effects from the Music Machine, but nothing productive has been achieved. The Music Machine is more than just a toy, it is possible to compose lengthy tunes and interface to the large world of MIDI (Musical Instrument Digital Interface).

In case you are new to music, I'll explain some terminology. A *bar* is a sub-set of a tune. In other words, a tune comprises one or more bars. *Time signature* refers to the number of beats in a bar. *Tempo* may seem rather obvious: the speed at which the notes in a bar are played – ranging from lento (snail's pace) to rapido (guess).

To compose your song, first choose the **bar editor** from the menu. Two synthesized voices may be played in parallel – this seems strange, for the Amstrad sound chip can use three voices simultaneously. The first thing to do is alter the time signature; it can be 8, 12 or 16 (beats per bar). Entering notes couldn't be simpler; move the cursor using the arrow keys; 'plant' or remove a note with a touch of the spacebar. You can't trick the machine into having more than two notes aligned vertically on a stave; enter a third and the nearest to it will disappear.

Notes are shown as tiny black rectangles. These can be natural (the white keys on a piano), or sharps and flats (the black keys). If a note is to be sharp then the symbol # will display above or below the stave nearest the note. It is possible to play the bar you are currently working on, making it easy to spot the bum note that will inevitably creep in. Up to 255 bars are possible, again subject to memory availability. Press **L** and lyrics can even be typed in under each bar, making it simpler to assemble your song.

Once the music bars have been worked out and edited, you will need a drum rhythm to accompany it. This is achieved with the **drum editor**. The technique is similar. The different drum sounds are named, ranging from Cowbell to Bass. Parallel to the names is a large stave on which to place the drum rhythm. The same rules apply as for the bar editor – the time signature and tempo need to be set. One notable exception: three discrete drum sounds can be played simultaneously.

All the bars created, enter the **tune editor**. Here the music bars and drum bars can be placed into any order you designate. That done, it's just a matter of sitting back and listening to your masterpiece. After a couple of hours I produced a tune of No 1 quality. Unfortunately no one else agreed.

And there's more! To connect a Midi keyboard to the Music Machine, all that is needed is a cable from one to the other. The required Midi in, out and through ports are all clearly visible on the Music Machine. If you are lucky enough to possess a Midi synthesizer you will find a host of exciting things to play with. Briefly, it is possible to play any of the captured samples held in Arnold's memory from the Midi keyboard over the entire musical range. Composed tunes may be sent to the Midi synth and played. Any of the voices the Midi device might contain can be played, even both at the same time. Using the microphone, the Midi keyboard's voices can be captured and edited. Voices can be switched on the Midi keyboard to simulate different instruments. Impressed? I certainly was!

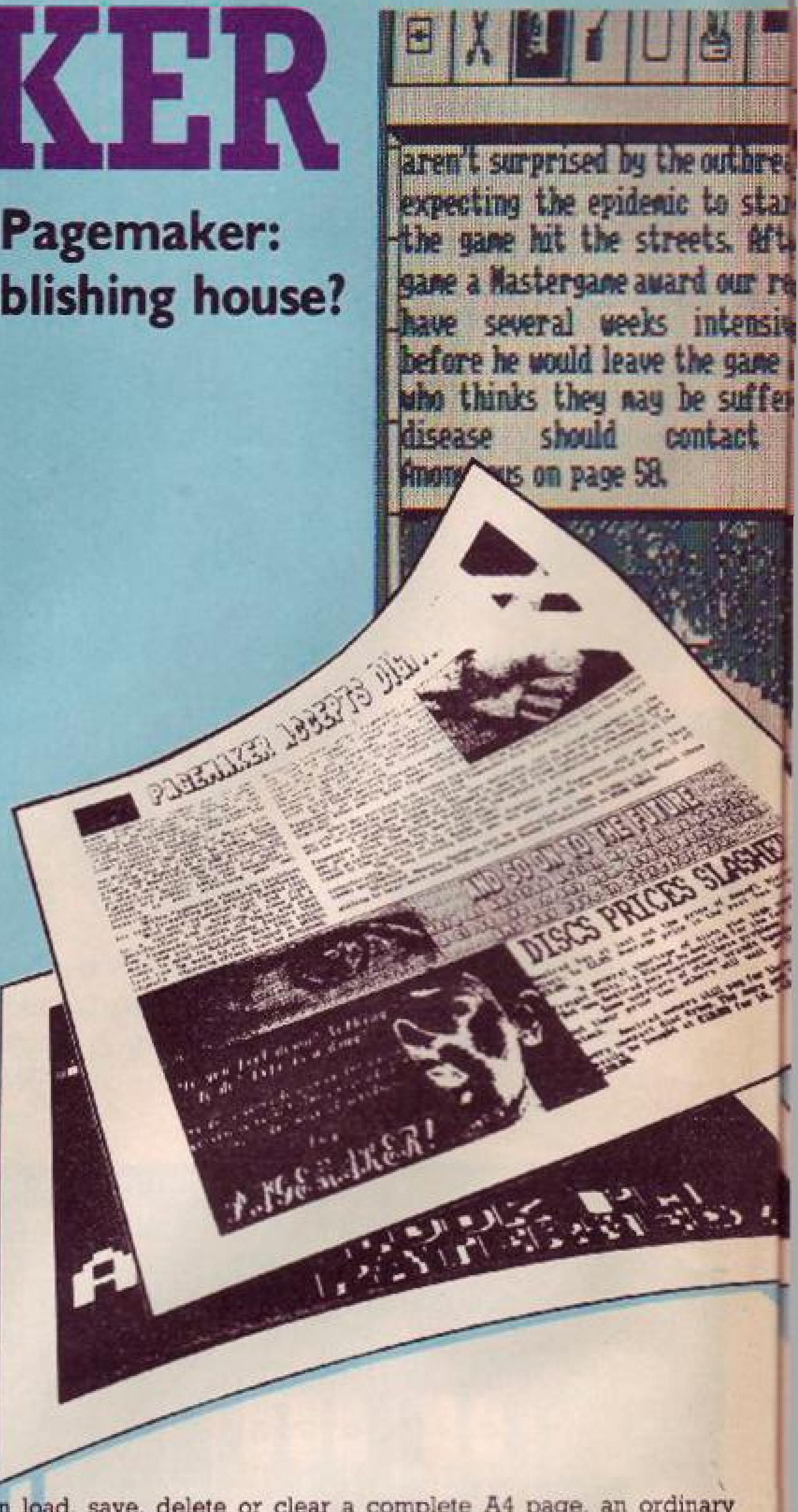
You can define any of the 16 Midi channels to receive or transmit data. There is complete freedom over where you send the Music Machine's drum and musical signals. One disappointing thing concerning the software: if you wish to play fairly advanced musical compositions via the Midi keyboard, and store them, edit them and then play them back at a later date, forget it – this is just not possible. As the current software to read, store and output sound samples uses up the whole of memory, there is no conceivable way around this, other than having an overlay system whereby the Midi software loads into memory when required.

One or two niggles aside, the Music Machine is a very powerful interface. Virtually everything you require for music composition is at your fingertips. Both beginner and old whip will learn much from this package and get a great deal of enjoyment in the process. It's a must if music making is your bent.

GOOD NEWS	BAD NEWS
▶ Terrific sound sampler. ▶ Drum samples have to be heard to be believed. ▶ Powerful editing facilities. ▶ Excellent sound effects can be created. ▶ Simple to follow instructions.	▶ No through-port. ▶ Not possible to hear both music and drums simultaneously through speaker. ▶ Not possible to edit Midi keyboard compositions.

PAGEMAKER

Richard Monteiro examines AMS's Pagemaker: can it turn your Amstrad into a publishing house?



AMX Pagemaker

Advanced Memory Systems, £49.95 disk – for 6128 or 664+64k or 464+64k+disk

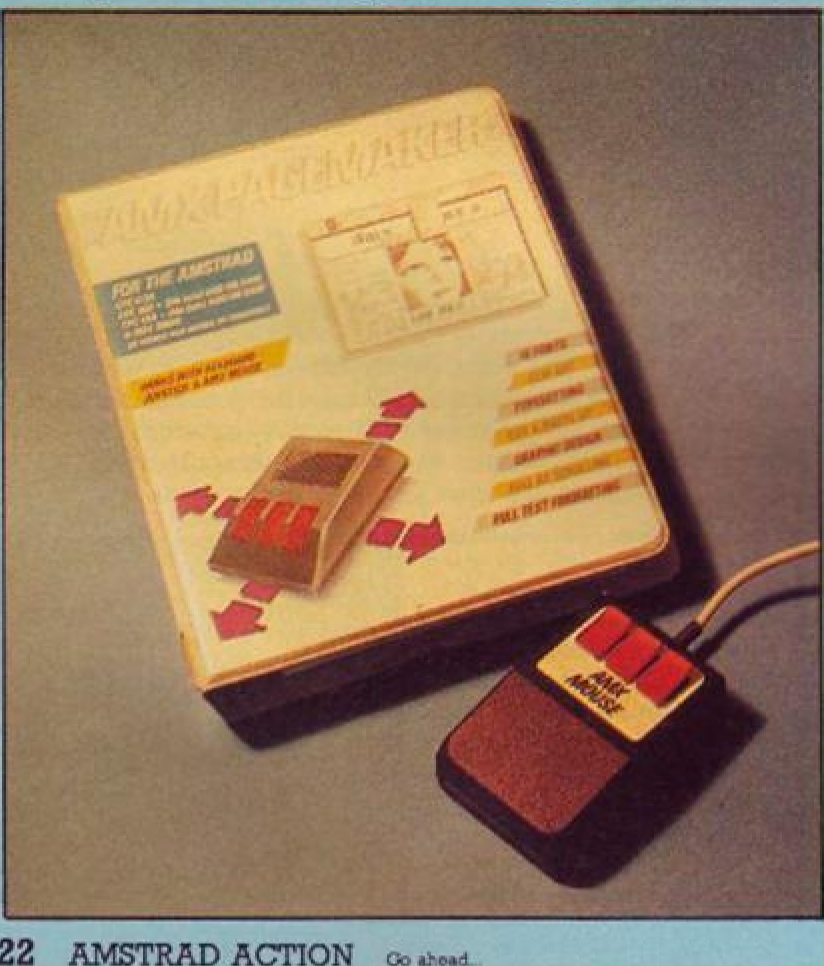
Here, at last, is the legendary *Pagemaker*. Has the long-drawn-out wait been worthwhile? Are the features up to scratch? Is it worth the money? Read on and judge for yourself.

With *Pagemaker* you can design your own magazine on your computer screen – an A4 page containing both text and graphics freely intermixed. Essentially, it is a high-resolution typesetting and artwork system.

You will drool when you hear what AMS's *Pagemaker* can do. The system can be used with either the AMX mouse or a combination of joystick and keyboard controls. Graphics masterpieces you created earlier on other software can be 'imported' to *Pagemaker*. Text files from many well-known wordprocessors such as *Tasword*, *Protext* or *WordStar* can be loaded in. You can print text in a number of different typestyles, making flow around graphics. If you don't find that impressive, then having the ability to convert video images (such as those produced by the Vidi video digitizer reviewed two issues ago) into a form that *AMX Pagemaker* can understand, certainly is.

When you first load *Pagemaker*, you are presented with a screen displaying several icons – symbols representing options available – and a section cordoned off for your design. Select any of these icons and a small menu will pop up, letting you get at any of the drawing or text-handling routines. The top left of the screen displays seven icons and the top right shows two.

We'll start with the left-most icon, which looks like a plus sign. Selecting this causes a three-option menu to appear. From here you can load, save, delete or clear a complete A4 page, an ordinary screen or just a 'cutout' – a small part of a page.

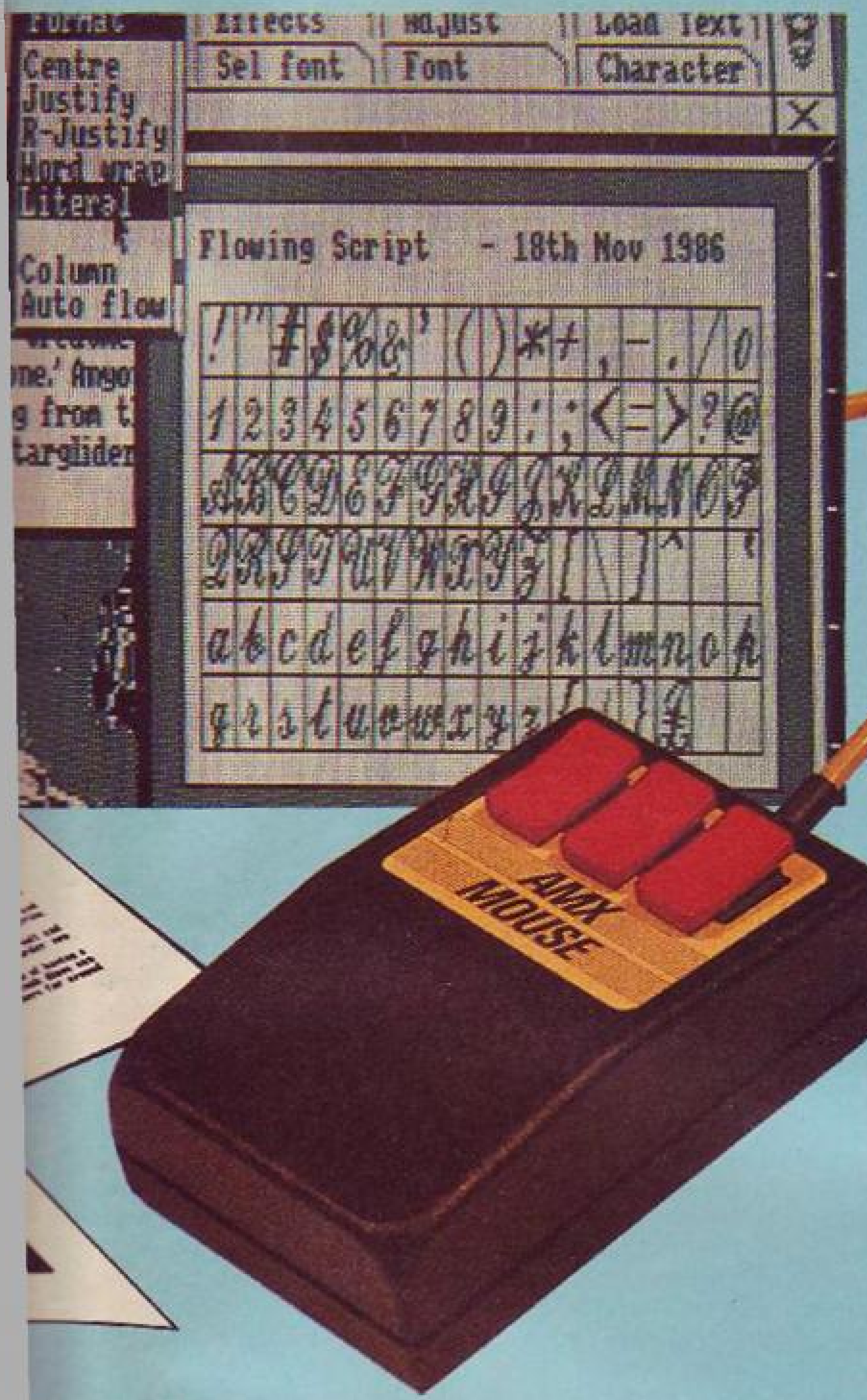


A page will take up a staggering 68k of disk storage; screens take up the normal 17k. The screen is in Mode 2, making the most of high-resolution graphics. Up to 16 different shades of grey can be displayed, giving some excellent detailed and interesting pictures. Mode 0 and Mode 1 screens can be loaded into the page – different colours will have different grey-levels associated to them.

The next icon, in the form of a pair of scissors, lets you cut, paste, rotate, stretch and scroll any area of the page. A rectangular area (which you can define) can be easily duplicated elsewhere with the Copy function. The usual mirror images – left-to-right and top-to-bottom – can be done; so can rotations of 90, 180 and 270 degrees.

Using the Rotate option will often corrupt highly detailed images. This is because Mode 2 screens have asymmetrical resolution – the pixels are taller than they are wide. Sometimes you can take advantage of this to get amazing effects.

Stretching or squashing a picture can produce excellent results. This must be one of the most powerful functions on any art package. Choosing the Stretch option gives you the further choice of reducing the image by half or magnifying it to double-size. The third option, variable stretch, will let a rectangular area of the screen be squeezed or expanded into another rectangular area with different proportions.



Another very useful facility is Scroll. An area of the canvas can be scrolled or moved in any direction to pixel accuracy. It's great if you like distorting someone's face, for instance.

The heart of the *Pagemaker* system is the text mode, selected by an icon displaying a script letter A. Text can be placed on the screen in a multitude of sizes, fonts and formats. Font sizes can be varied from a few square pixels to 128 by 64! Fonts can be redesigned with the in-built character definer. Text can be printed using proportional spacing, left and right justification, centering or word-wrap. Many other features are included and are easily selected.

Many of these tricks – centring for example – work to pixel accuracy, not just to the nearest character.

With the Format option you design your basic text appearance – column width, straight or ragged margins, etc.

Centring text is the first of many text-handling functions: words are centred between the cursor position and the right margin. Text will be centred inside the page – not the canvas area. If a text window has been defined then everything will be centred in that.

If you wish all lines to be the same length in a column, use the Justify option. This prevents words sticking out on the right side of the column; it works by inserting enough extra space between words to pad out each line to the correct length. 'Ragged left' or 'right-justified' text is also possible, ideal for lists or directories.

Selecting Word Wrap ensures that text is not split at the right margin. Instead, the whole word is carried over to the next line. Justified text is not possible when this option is in use.

If what-you-type-is-what-you-get is what you want, choose Literal, which will not format text at all.

Column and Autoflow are two independent Format options that control the overall way in which the other Format options are implemented. Column is the default; it means that when the right margin is reached, the text should be formatted – as with standard wordprocessors.

Autoflow, on the other hand, is very different. With it you can achieve incredible layouts. It allows text to fill an area of almost any shape. When a picture or other object blocks the path of the text, a new line is created. It has to be seen to be believed.

Effects alters the way the font is output to the screen. Words can be *italicized* or '**thickened**' (made bold), which can do wonders when highlighting parts of your text. There is one further effect that you can subject your text to: Attribute. This basically alters the area around a character by changing it to the opposite colour from the character.

The size and spacing of characters within a font can be altered with Adjust. When altering the size of a character, you will see it stretch (or shrink) enabling you to note exactly how it will appear on screen. Letters have different widths; for example, an **i** is much narrower than an **m**. When text is output to the canvas, the computer makes sure that the gap between characters is identical – a very professional finish. It is possible to 'kern' or adjust this spacing; even negative spacing is allowed, which can produce interesting results like an expensive advert.

For simple layouts like posters or even cartoon strips, manual entry of text is ideal. However, for large chunks of text it is probably best to use a proper wordprocessor. *AMX Pagemaker* can load in text files produced from many of these. If any of the Format options have been pre-selected, they will be obeyed. For example, if Autoflow is on and the cursor is positioned inside the object (or for that matter outside), the loaded text will fill that space.

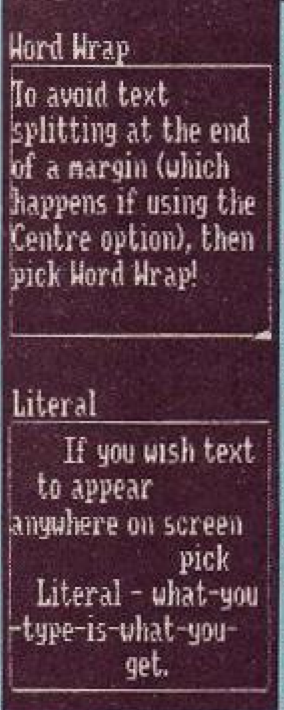
There are four fonts to choose under the Sel Font option: the normal Amstrad typestyle, a flowing typestyle, an outline font and what printers call a 'pi font' – various symbols and signs. It is possible to define any of the fonts (bar the Amstrad one) or characters using the character definer included in the package. Fonts can be designed from scratch using the Font option. Once designed, the font can be saved. Likewise, other fonts can be loaded whenever required – these will no doubt be for sale from AMS and others in due course.

The last of the text-handling options is Character. This allows you to 'pick up' from any location on the screen a character or design and invert it (change whatever was white to black and vice-versa) or mirror it top-to-bottom or left-to-right.

Hopping onto the next icon, a pot with a paint brush sticking from it, we find a miniature graphics studio. Its facilities equal or exceed those in many stand-alone graphics packages.







Paint, the first option, is a very intelligent fill routine. It can fill any shape with your choice of character or pattern. Tremendous results can be achieved using this – even if you make a mistake, there is an Unfill option. It all adds to the making of a superb package.

The Spray option can create convincing pictures. The brush spray will produce a solid effect; mist spray will give an airbrush-type effect (a series of random dots that eventually build up to make the pattern).

All the standard features available in normal art packages are present in *Pagemaker*: circles, ellipses, arcs, triangles, boxes and lines. You can define their sizes and shapes. The shapes are drawn extremely rapidly – unlike other art packages.

Select Font, Font and Character have all been repeated in the graphics studio for convenience. These options work just as well for designing patterns and displaying them as for characters.

Defining windows is next, chosen by selecting the icon showing a blank page. A window is a small area of the screen in which all your work will be confined. For example, if you use the Spray option, the spray will appear only inside the window, preventing the rest of your work from being ruined by an accidental slip.

It is possible to define either a text window or a graphics window. Only one window may be in use at a time; this is not a limitation as once you have finished with one, you can easily define another. If necessary, you can invert the contents of either type of window.

Many packages fall down on their printer-dump routines. *Pagemaker* scores heavily in this area. Selecting the printer icon will let you choose either an A4 or A5 printout. Further to this, you are given the choice of three dump qualities: Draft, which is 'high speed', takes half an hour for a supposedly low-quality A4 dump. There is also Standard – medium speed and medium quality. Finally there is NTQ, near typesetting quality.

Be warned that you will be waiting well over an hour for a NTQ dump. But the results! They are stunning! If I had not witnessed the finished page, I would never have believed that such quality was available from such an inexpensive setup, compared to phototypesetters costing as much as a house.

The high-quality dump should be used only when your ribbon is fairly worn, to avoid smudging. It caters for most printers – Epson-compatibles, Amstrad DMPs. And in the 'near future' it will be possible to drive a laserprinter.

You can dump a complete page, just the screen in view or a graphics or text window previously defined. What more could you ask?

The last icon on the top left of the screen, a shaded square, could well be dismissed as the most uninteresting of the lot. In fact this is the Goodies icon: it contains a jumble of facilities.

Preview, the first, lets you either inspect the page in ram or any other pages you may have stored on disk. It draws a miniature of the page on screen.

Gridlock helps align the cursor accurately. Imagine a grid drawn on the screen – you determine its spacing. When the cursor is moved, it jumps in tidy increments according to the grid. This is extremely handy in technical drawings where straight lines are essential.

If you want the cursor co-ordinates displayed, select the Coords option.

Calls to the computer's operating system are available by selecting Command. These are better known as 'bar commands' – commands prefixed with the '|' symbol.

It is possible to set the speed at which the pointer or cursor travels. Default is slow – but that is hare's pace by comparison to some other art software. The options for medium and fast can prove tricky for detailed drawing.

Scanner is the final goody. It lets pictures from a video digitizer be 'grabbed' and placed anywhere within the page. (Just as we went to press, Rombo, maker of the *Vidi* digitizer reviewed in *AA 15*, released an overlay file to read its images into *Pagemaker*. We did not have time to test it.)

There are only two icons left on the screen. One looks like a sick mouse: the Quick-Click Window (QCW). The other is a cross. You'll be thankful for it when you have made an error and wish to delete your last command.

The QCW has many features that otherwise need two or three button presses. Choosing this icon will cause a further 20 to spring to view: gridlock on/off, zoom, ghosting on/off, spray size/type, pattern select, shape characteristics and instant eraser, to name but a few.

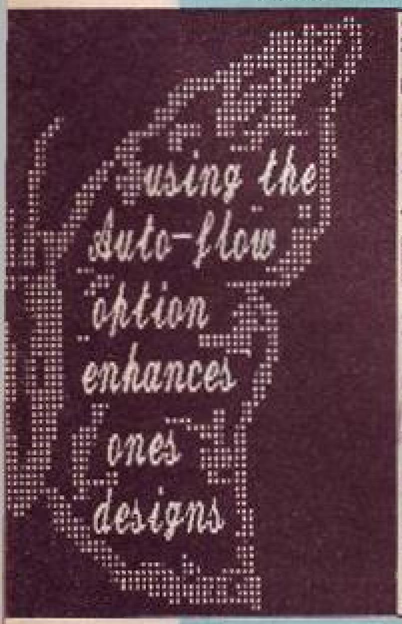
With Zoom you can magnify and alter an area of the screen – ideal for fine or detailed work. Ghosting is the process of displaying an image on the screen but using only one of the two colours that make up that image. Shapes can be drawn hollow, solid, patterned and dotted, among other ways.

You're not convinced that *Pagemaker* is much use? The potential is there to create startlingly good newsletters, press releases, even small magazines – look, our cover page was designed using *Pagemaker*.

What a system! The software is extremely well written with just about every function you could ask for – and others you would never dream of.

You may well wonder how it keeps all this information in memory. The answer is that it doesn't. If you select an option that is not currently in memory, it will load it from disk. Shuffling disks can become a bore, but the end results fully justify the need.

Before you rush out and buy *AMX Pagemaker*, make sure you have 164k of memory: either a 6128, a 664 with an extra bank of 64k memory (the DK'Tronics expansion ram works fine), or a 464 with an extra 64k and a disk drive. If you have these, then don't hesitate to obtain this extremely useful utility.





GOOD NEWS	BAD NEWS
▶ Features galore. ▶ Powerful text-handling routines. ▶ Advanced graphics toolbox included. ▶ Digitized pictures can be incorporated. ▶ Printouts are unbelievable.	▶ Takes a while to get used to all the features.

Advanced Memory Systems Ltd
Freepost, Warrington, Cheshire, WA4 1BR ☎ (0925) 41 3501

NEW! FROM PSS "TOBRUK" PS005 - £9.95

WHAT !

SURELY YOU'RE NOT STILL WAITING FOR THAT GAME TO LOAD ?

ISN'T IT ABOUT TIME YOU BOUGHT YOUR SOFTWARE FROM AMBYTE, THE ONLY COMPANY WHICH CAN SELL YOU GAMES SOFTWARE ON DISC AT CASSETTE PRICES

HERE'S HOW IT WORKS

From the list below you pick the games you want, and we put them on disc - easy isn't it? We call them custom compilations. The advantages are clear; you benefit from the loading speed disc games offer, so you get more out of your software, but you don't pay any more than if you were buying the games on tape. Not only that, many of the games we offer wouldn't be available on disc - where else could you buy a Mastertronic game for £1.99, on disc, if it isn't from AMBYTE.

ACTIVISION		
AC001	Ghostbusters	9.99*
AC002	Mindshadow	9.99*
AC003	Master of the Lamps	9.99*
AC004	Rescue on Fractalus	9.99*
AC005	Hacker	9.99*
AC006	Barry McGuigan Boxing	9.99*

ALLIGATA		
AL001	Who Dares Wins 2	8.95

MASTERTRONIC		
MA001	Finders Keepers	1.99
MA002	Chiller	1.99
MA003	Nonterraquous	1.99
MA004	Locomotion	1.99
MA005	Soul of a Robot	1.99
MA006	Formula One Simulator	1.99
MA007	One Man and His Droid	1.99
MA008	Caves of Doom	1.99
MA009	Into Oblivion	1.99
MA010	Spell Bound	2.99
MA011	The Last V8	2.99
MA012	Kane	1.99
MA013	Radzone	1.99
MA014	Five a Side Football	2.99

MIKRO-GEN		
MK001	Battle of the Planets	9.95
MK002	Three Weeks in Paradise	9.95
MK003	Herberts's Dummy Run	9.95
MK004	Equinox	9.95

US GOLD		
US001	Beachhead 2	9.95*
US002	Impossible Mission	9.95*
US003	Winter Games	9.95
US004	Return to Oz	9.95*
US005	Bruce Lee	9.95
US006	Goonies	9.95*
US007	Zorro	9.95*
US008	Bunlight	9.95*
US009	Dambusters	9.95
US010	Kung Fu	9.95
US011	Bounty Bob	9.95
US012	Desert Fox	9.95

AMBYTE CASSETTE SOFTWARE ON DISC

GREMLIN GRAPHICS		
GR001	Thing on A Spring	8.95
GR002	Way Of The Tiger	9.95
GR003	Super Sleuth	8.95*
GR004	Bounder	8.95
GR005	Monty on the Run	8.95*

KUMA		
KU001	Star Avenger	6.95
KU002	Galaxia	5.95
KU003	Rock Raid	6.95
KU004	Fruity Frank	6.95
KU005	Caverns of Mars	6.95
KU007	Argo Navis	6.95
KU008	Renegade	6.95
KU009	Buster Block	6.95

ELITE		
EL002	Commando	8.95
EL003	Bomb Jack	8.95
EL004	Ghosts and Goblins	8.95

PALACE		
PA001	Cauldron	8.99
PA002	Cauldron II	8.99

FIREBIRD		
FI001	Rasputin	7.95
FI002	Runestone	7.95
FI004	Costa Capers	7.95
FI005	Chimera	7.95
FI006	Thunderbirds	3.95
FI007	Willow Pattern	3.95
FI008	Don't Panic	3.95
FI009	Subsunk	1.99
FI010	Shorts Fuze	1.99
FI011	The Comet Game	7.95
FI012	Ninja Master	1.99
FI013	Collapse	1.99
FI014	Helichopper	1.99
FI015	Thrust	1.99
FI016	Seabase Delta	1.99
FI017	The Wild Bunch	1.99
FI018	Star Firebirds	1.99
FI019	Harvey Headbanger	1.99
FI020	Spikey Harold	1.99

PSS		
PS001	Theatre Europe	9.95
PS002	Battle for Midway	9.95
PS003	Battle of Britain	9.95
PS004	Swords and Sorcery	9.95

CRL		
CR001	Endurance	7.95
CR002	Juggernaut	7.95
CR003	Formula 1	7.95
CR004	Blade Runner	8.95

MARTECH		
MT001	Zoids - The Battle Begins	8.95
MT002	Brian Jacks Superstar	8.95
MT003	Geoff Capes Strong Man	8.95
MT004	Sam Fox Strip Poker	8.95
MT005	WAR	8.95*

BRITANNIA SOFTWARE		
BR001	Play Your Cards Right	7.95

CCS		
CC002	Arnhem	9.95
CC003	Desert Rats	9.95

ELECTRIC DREAMS		
ED001	Winter Sports	9.99*
ED002	Spindizzy	9.99*

MIRRORSOFT		
MS001	Dynamite Dan	8.95
MS002	Boulderdash	9.95

ORDERING *(CPC 6128/664 & 464 machines only)*

DON'T FORGET YOU MUST SPEND AT LEAST £15 ON TWO GAMES.
Please don't order any games marked with a star (*) unless you have telephoned us (on the number below) to make sure they are available. These games were not available at the time of our going to press but should be when you read this - but don't take a chance - phone us, otherwise your order might get delayed.
You can order as many games as you like, use a separate piece of paper if you prefer, but don't forget any of the deatails asked for by the form.

Phone 0277 229684

Code Number	Title	Price
	Total Order Value	

BARCLAYCARD VISA   Access

Name ______

Customer Code (if you have one please use it, it saves time) ______

Address ______

______ Post Code ______

Cheques and postal orders should be made payable to AMBYTE. All orders should be posted to AMBYTE, 200 North Service Rd, Brentwood, Essex. CM14 4SG

IMPORTANT

YOU MAY ORDER AS MANY GAMES AS YOU LIKE SO LONG AS THE COMBINED VALUE OF TWO OF THEM EXCEEDS £15. YOU CANNOT, FOR EXAMPLE, ORDER SEVEN MASTERTRONIC TITLES UNLESS YOU ALSO ORDER TWO NORMAL PRICED GAMES.

PROBLEM ATTIC

We try to solve your problems with Arnold – nothing



More on the disk operating system

I noted with interest your article in Problem Attic (December) on the disk rom routines. I discovered these routines myself after some heavy hacking and decided to use them in a disk sector editor I was writing, but came up with a problem I hope you'll be able to help me with.

Your article said one of the registers must be pre-set before calling the various routines. One of these, the C register, contains the sector required plus &C0 for data-format disks or &40 for CP/M disks. My problem is that the user of my program may not know the format of the disk he wants to edit and entering the wrong format causes a 'Read error' message which stops the program.

Is there any rom routine I can use to determine the disk format? Could you also tell me how the system reads the various differently formatted disks without any problem?

M Worsley
Fareham, Hants

There are two ways in which you could discover the format of a track. The first is 'legal'; the second is not. I won't repeat previous explanation of how to use the commands on the disk rom.

First, switch off Amsdos error messages (command 1 – Set message). Then using Read Sector (command 4), place a value (1, &41 and &C1 for IBM, CP/M and Data formats respectively) into the C register and jump to the rom address. If the sector was read correctly, the carry flag will be true. It is then a simple task of recording, somewhere in memory, the disk format type. In the example below, 'which' will hold the format type; if for some reason a format wasn't detected, the error byte &FF will be placed into 'which'.

```
ORG &9000

LD HL,setmess
CALL &BCD4
LD (setmess1),HL
LD A,C
LD (setmess2),A

LD HL,readsec
CALL &BCD4
LD (readsec1),HL
LD A,C
LD (readsec2),A

LD A,&FF                ;switch off
RST 3,setmess1          ;error messages

LD HL,&4000             ;buffer address
LD E,0                  ;drive
LD D,0                  ;track
LD C,1                  ;sector no.
RST 3,readsec1
JP NC,next              ;on-error jump
LD A,1                  ;else store
LD (which),A            ;sector no.
CALL onmess             ;messages on
RET                     ;then return

next:
     LD HL,&4000
     LD DE,0000
     LD C,&41           ;sector no
     RST 3,readsec1
     JP NC,next1        ;on-error jump
     LD A,&41
     LD (which),A
     CALL onmess
     RET

next1:
     LD HL,&4000
     LD DE,0000
     LD C,&C1
     RST 3,readsec1
     JP NC,next2
     LD A,&C1
     LD (which),A
     CALL onmess
     RET

next2:
     LD A,&FF           ;if unable to
     LD (which),A       ;read, set byte
     CALL onmess        ;to &FF then
     RET                ;return

onmess:
     LD A,0             ;switch error
     RST 3,setmess1     ;messages on
     RET

setmess:
     DEFB &81
setmess1:
     DEFW 0000
setmess2:
     DEFB 00

readsec:
     DEFB &84
readsec1:
     DEFW 0000
readsec2:
     DEFB 00

which:                  ;format type
     DEFB 00            ;held here
```

The second method is to call directly a rom routine which automatically places the sector number in the memory location &BE51. This is not an approved method for accesing the disk rom as it is not via jump blocks – this means that if the rom is altered at any time in the future, the routine may not work.

To use this, you must first move to the track you wish to test. Use the the command Move Track (command 7). Following that, load the E register with the drive number (0 for A and 1 for B), then a call to the disk rom at location &C56C is all you need. This will place the sector number read into memory location &BE51. Very neat and simple. But don't blame me if it does not work now or in the future! Here is a brief example:

```
ORG &9000

LD HL,movtrak
CALL &BCD4
LD (movtrak1),HL
LD A,C
LD (movtrak2),A
LD (findsec1),A

LD E,0                  ;drive no.
LD D,0                  ;track no.
RST 3,movtrak1
LD E,0                  ;drive no.
RST 3,findsec
LD A,(&BE51)            ;get sector no.
LD (which),A            ;put in 'which'
RET

movtrak:
     DEFB &87
movtrak1:
     DEFB 0000
movtrak2:
     DEFB 00

findsec:
     DEFW &C56C
findsec1:
     DEFB 00

which:                  ;sector no.
     DEFB 00            ;placed here
```

PROBLEM ATTIC



is too simple or too complicated for our experts

Another poet

To the brilliant mag AA,
I wish to pose,
If I may,
To you some questions,
The answers of which,
I hope you knows, (*)
Therefore, here goes –
(* – poetic licence)

1. Do Type-ins have to be accompanied by a print-out?
2. Where can I buy disk boxes? How much are they?
3. What is the best machinecode tutorial book?
4. When will *Hitch-Hikers Guide to the Galaxy* be ready for the 464?
5. When will I receive my free disk copy of *3D Starstrike* after subscribing to your fab mag?
6. What is the best modem on the market for us Amstrad users?
7. Finally, why does a CPC crash when the following line is entered (replace the dots with about 100 minus signs):

```
PRINT 365-(-...-5)
```

Gavin Manning
Wanstead, London

Keeping it short and to the point:

1. No.

2. Load & Run (tel 0322 73129) sells a selection of disk boxes, the best being the Proto 3-inch box retailing at £7. It's also for sale at WH Smith computer departments.

3. Introducing Amstrad CPC464 Machine Code *is the book to start on. It's what I used. Being both easy to follow and informative, there's nothing to compete with it. By Ian Sinclair, ISBN 0 00 383079 9, it sells at £9.*

4. Your guess is as good as mine!

5. It should be on the way as soon as you renew.

6. We use the Nightingale modem and Commstar software on rom from Pace. For more details refer to last month's centre pages.

7. Your last point is very interesting, but leaves me baffled – if anybody has any ideas or has found similar quirks, do send them in.

If not SETUP, what?

I have been following the series on CP/M with interest as you cater for CP/M Plus used on the Amstrad 6128. I have *Supercalc 2* on disk, and after reading your article on Setup thought that at last I had found a way of starting up *Supercalc* immediately on booting CP/M. Unfortunately Setup will not run under CP/M Plus which *SC2* requires.

My appetite whetted, I tackled the manuals, trying to find a way of achieving the desired effect – no luck.

I have to boot CP/M, enter `SC2` at the `A>` prompt, followed by return when the copyright messages appear. Finally the slash (/) key followed by `L` to load a particular file into the spreadsheet. This totals six operations before I'm anywhere near starting – all very tedious. Is there any way to carry out these operations automatically when CP/M first boots?

CPL A Jackson
RAF Wittering, Peterborough

I certainly had lots of fun and games working this problem out. This is the simplest method I could think of:

Transfer the files PIP and SUBMIT onto your Supercalc 2 *disk (these must be CP/M Plus versions). This can be put into effect by booting your CP/M Plus system disk and entering:*

```
PIP B:PIP.COM=A:
```

This will load PIP.COM into memory; CP/M will ask you to place the destination disk (this should be the Supercalc *disk) into drive B. Don't worry if you only have one drive – insert the disk into Drive A; the system can be fooled into thinking it has two. PIP.COM should now be on the* Supercalc *disk. Replace the system disk into drive A and type:*

```
PIP B:SUBMIT.COM=A:
```

Just carry through the procedure as before, and I hope you now have the two files on your Supercalc *disk.*

You now need to create a file called PROFILE.SUB. A file with a .SUB extension has the special function that it can act as a command file – that is, it can tell CP/M first to load a program and then 'press' certain keys. In fact it is fairly powerful and can be useful for carrying out boring or repetitive tasks. Unfortunately, true to most CP/M functions, it's not easy to set up.

The reason for calling the file PROFILE is that when the computer first enters CP/M Plus, it looks for that filename and executes it immediately. To create such a file, boot your Supercalc *disk. At the* `A>` *prompt, type:*

```
PIP PROFILE.SUB=CON:
```

This will cause a cursor to appear. Make sure you type exactly the following:

```
SC6128(RETURN)(CTRL-J)
<(RETURN)
<//Lfilename(RETURN)(CTRL-J)
(CTRL-Z)
```

That will have created a file called PROFILE.SUB on your disk. On my version of Supercalc 2*, I had to type* `SC6128` *to run it. If yours is called SC2, alter the first line to suit. Anything in brackets should not be typed literally; they are instructions for you to perform. So for example, where you encounter CTRL-J, press the Control and J key simultaneously – this, by the way, means move down one line, and CTRL-Z is an end-of-file marker.*

The first line of Profile.sub indicates the primary action to perform (in this case it to load SC6128). The greater-than sign (<) is used within a Submit file to represent Return in an application program. In the third line, you will notice the keys you must press to reach the desired menu within Supercalc *and load a file. Alter 'filename' to the file you wish to load.*

For some reason I found it necessary to use two slashes, as a single one didn't seem to work. Any ideas, anyone?

Just one more time

The December issue suggested that people might send in programs to simulate bingo. Here is a one-liner. Characters with an up-arrow are control codes. For example, the `↑G` in front of 'Press a Key' means type Control-G – which will sound a beep when the program runs.

```
1 IF c THEN WHILE c<91:a%=RND(1)*8:b%=RND(1)*9:IF m(a%,
b%)=0 THEN PRINT"↑GPress A key";:WHILE INKEY$="":WEND:PRI
NT"↑Q":LOCATE b%*4+1,a%*2+4:k=a%*10+b%+1:PRINT k:PRINT"↑0
↑S↑W↑O↑C";k;"↑O↑B":c=c+1:m(a%,b%)=c:WEND:END:ELSE GOTO 1:
ELSE MODE 1:c=1:GOTO 1
```

S Fearnley
Drayton, Abingdon

Okay, you win. But I tell you, it's the last time, and only because it's one line. The AA offices are knee-deep in bingo programs. It has got to the stage where Bob barely has the strength to (ahem) wade to his joystick. Thank you for the overwhelming response. Please, no more!

(Note a peculiar Control-Zero near the right margin of the listing's third printed line. The others are Control-O – the letter. We apologise that the slashed zero is not yet working on our new typesetter – just as we'd perfected it on the old one!)

TYPE - INS

3D loops

Here is a fine routine from **JD Crabtree** of Darlington, using a simple algorithm. It draws up 15 symmetrical patterns of increasig complexity and refinement. The shapes are based on rotating and interweaving circles and ellipses. The demo takes around seven minutes to complete – well worth the time. It just goes to show that Basic is capable of complex and powerful mathematical functions.

```
1 ' 3D LOOPS
2 ' JD Crabtree
3 ' Amstrad Action      Feb87
10 MODE 2:INK 0,0:BORDER 0:INK 1,26
20 DEG:FOR r=0 TO 2
30 FOR num=8 TO 40 STEP 8:GOSUB 200
40 IF r=0 THEN nam$="Rotating"
50 IF r=1 THEN nam$="Spinning"
60 IF r=2 THEN nam$="Weaving"
```

```
70 PRINT nam$;":":PRINT:PRINT num
80 IF r=2 THEN x=213 ELSE x=320
90 ORIGIN x,200
100 FOR rot=fst TO ac STEP ang
110 FOR s=fst TO ac STEP ang
120 IF r=0 THEN sm=rot+s ELSE sm=rot-s
130 DRAWR stp*SIN(sm),stp*COS(rot+s)
140 NEXT s,rot
150 FOR del=0 TO 1500:NEXT del:CLS
```

```
160 NEXT num,r
170 CLS:PRINT"Press Any Key To Repeat."
180 WHILE INKEY$="":WEND:RUN
190 '    ** factor formulae **
200 ang=360/num
210 IF r=0 OR r=2 THEN fst=0
220 IF r=2 THEN ac=360 ELSE ac=360-ang
230 IF r=1 THEN fst=ang/2:ac=ac+ang/2
240 stp=ang*1.7:RETURN
```

Variable height

We have had slow double-height, fast double-height, Basic double-height and machinecode double-height routines in past issues. A sensible follow-up would be a program for variable height or width. You have **John Keneally** of Exeter to thank for this.

The main routine is from line 6000 on. John has included a small demo which shows off the program's power. If you wish to use it in your own listings, the following variables must be set up:

a$	the string to display
x,y	graphic coordinates
mx,my	magnification factors – horizontal and vertical
dx,dy	change in horizontal and vertical position for each successive character. Expressed as a proportion of the character size. For normal horizontal writing make *dx*=1 and *dy*=0.
gink	pen colour

```
1 ' Variable height
2 ' John Keneally
3 ' Amstrad Action    Feb 87
10 SYMBOL AFTER 32:mx=4:my=3:x=100
20 y=326:gink=2:dx=1:dy=0
30 MODE 1:a$="Amstrad":GOSUB 6000
40 my=7:mx=6:y=280:x=30:gink=1:dy=-0.3
50 a$="ACT":GOSUB 6000:x=316:y=212
60 dy=0.3:a$="ION":GOSUB 6000
70 my=5:y=150:x=42:dy=0:dx=2.5
80 a$=CHR$(250)+" "+CHR$(251)
90 GOSUB 6000:x=192:y=350
100 dx=1:dy=0.2:mx=2:my=2
110 a$="BRILL":GOSUB 6000
120 y=y-64*dy:dy=-dy
130 a$="IANT":GOSUB 6000
140 gink=3:x=192:y=100:dy=0
150 a$="EXCITING":GOSUB 6000
160 GOTO 160
6000 i4=2*my-2:i5=2*mx-2
6010 FOR i=1 TO LEN(a$)
6020 i1=(ASC(MID$(a$,i))-32)*8+HIMEM+1
6030 y1=y:FOR i1=i1 TO i1+7
6040 i2=PEEK(i1):x1=x
6050 WHILE i2<>0
6060 IF (i2AND 128)<>0 THEN PLOT
     x1,y1,gink:DRAWR i5,-i4:DRAWR 0,i4
     DRAWR -i5,-i4:DRAWR 0,i4
6070 i2=(i2*2) AND 255:x1=x1+2*mx:WEND
6080 y1=y1-2*my:NEXT i1
6090 x=x+16*mx*dx:y=y+16*my*dy
6100 NEXT i:RETURN
```

Landscapes

Last issue we reviewed the *Landscape Utility*. This month **Martyn Harrison** of Stockton-on-Tees has written an extremely short routine to do virtually the same: create landscapes. This is an excellent piece of programming – no need to shell out £19. With a little modification, it should be fairly simple to incorporate routines to draw clouds, trees and so on.

```
1 ' Landscapes
2 ' Martyn Harrison
3 ' Amstrad Action    Feb 87
10 DIM a(250),b(250),c(250)
20 MODE 0:nn=6:am=30:INK 0,11
30 FOR i=1 TO 15:INK i,RND*26
40 NEXT:FOR n=1 TO nn
50 a(n)=RND*80/n:b(n)=RND*2*PI
60 c(n)=RND*15:NEXT
70 PRINT:PRINT"    LANDSCAPES"
80 FOR x=0 TO 639 STEP 4
90 PLOT x,0,0:y=10
100 k=2*PI*x/640:FOR n=1 TO nn
110 y=y+a(n)*(1+SIN(n*k+b(n)))
120 DRAW x,y,c(n):NEXT n:NEXT x
130 FOR i=1 TO 3000:NEXT:RUN
```

Multi-coloured modes

Ever wanted twice as many colours in all modes? **TA Shah** of Blackburn, Lancashire, has written a fantastic utility that will allow four colours in mode 2, eight in mode 1 and all 27 in mode 0. As a consequence of the programming technique involved, when you issue a `MODE` command, the screen will flicker and look unsightly. To overcome this, several RSX commands have been included – these are commands preceded by a bar (|).

These are the extra commands and how to use them:

`|MODE,n` changes to mode *n* – fairly obvious.

`|INK` sets all the inks to be used by the interrupt routine. The inks are set by the operating system's usual `INK` command, but instead of the inks flashing when the second colour is used, the first number is used to display one colour and the second to display the other. You use it following the usual command, like this:

```
INK 1,3,6:|INK
```

This will display 2 separate colours on different parts of the screen – they will not flash.

`|SIZE,n` sets the size of the display area for the different colours. *n* must be a whole number between 1 and 5:

- 1 displays only one colour
- 2 – a quarter one colour
- 3 – half one colour and half the other
- 4 – three-quarters one colour
- 5 – all the other colour.

`|ON` switches on the interrupt routine.

`|OFF` returns your Amstrad to normal.

When the routines are on, all colours are changed because they are being flipped in the pallette memory. The second program is a demo, showing off exactly what it can do.

```
10 ' MULTI-COLOURED MODES
20 ' TA Shah
30 ' Amstrad Action    Feb 87
40 FOR t=&A000 TO &A155:READ a$
50 POKE t,VAL("&"+a$)
60 b=b+VAL("&"+a$):NEXT t
70 IF b=37637 THEN 90
80 PRINT"ERROR IN DATA":STOP
90 CALL &A000:MODE 1
100 PRINT"COMMANDS INSTALLED":END
110 DATA 01,0A,A0,21,54,A1,CD,D1,BC
120 DATA C9,1B,A0,C3,ED,A0,C3,FD,A0
130 DATA C3,54,A0,C3,3D,A0,C3,30,A0
140 DATA 4D,4F,44,C5,49,4E,CB,4F,46
150 DATA C6,4F,CE,53,49,5A,C5,00,00
160 DATA 00,00,00,DD,7E,00,FE,00,C8
170 DATA FE,06,D0,32,97,A0,C9,3A,1E
180 DATA A1,A7,C0,3D,32,1E,A1,CD,FD
190 DATA A0,21,1F,A1,06,81,11,61,A0
200 DATA C3,D7,BC,21,1F,A1,AF,32,1E
210 DATA A1,CD,DD,BC,C3,02,BC,F3,DD
220 DATA E5,D9,C5,DD,21,32,A1,06,0F
230 DATA C5,48,06,7F,ED,49,DD,4E,01
240 DATA CB,F1,ED,49,DD,23,DD,23,C1
250 DATA 10,EC,06,7F,0E,00,ED,49,ED
260 DATA 4B,52,A1,48,06,7F,CB,F1,ED
270 DATA 49,C1,D9,DD,E1,FB,3E,03,32
280 DATA 31,A1,21,28,A1,06,81,11,A6
290 DATA A0,C3,E0,BC,F3,E5,DD,E5,21
300 DATA 31,A1,35,28,05,DD,E1,E1,FB
310 DATA C9,D9,C5,DD,21,32,A1,06,0F
320 DATA C5,48,06,7F,ED,49,DD,4E,00
330 DATA CB,F1,ED,49,DD,23,DD,23,C1
340 DATA 10,EC,06,7F,0E,00,ED,49,ED
350 DATA 4B,52,A1,06,7F,CB,F1,ED,49
360 DATA C1,D9,DD,E1,21,28,A1,CD,E6
370 DATA BC,E1,C9,FE,00,C8,CD,54,A0
380 DATA DD,7E,00,CD,0E,BC,CD,3D,A0
390 DATA C9,DD,21,32,A1,06,0F,C5,78
400 DATA CD,35,BC,DD,70,00,DD,71,01
410 DATA DD,23,DD,23,C1,10,EE,AF,CD
420 DATA 35,BC,ED,43,52,A1,C9,00,00
430 DATA 00,00,00,00,00,00,00,00,00
440 DATA 00,00,00,00,00,00,00,00,03
450 DATA 0B,0B,00,00,00,00,00,00,00
460 DATA 00,00,00,00,00,00,00,00,00
470 DATA 00,00,00,00,00,00,00,00,00
480 DATA 00,00,00,00,00,05,10,00,00
```

```
1 ' Modes and colours demo
2 ' TA Shah
10 |MODE,0:GOSUB 170:FOR A=0 TO 15
20 INK A,A+15,A:NEXT A:|INK:LOCATE 1,1
30 FOR A=0 TO 15:PEN A:PRINT "PEN";A;
40 NEXT a:LOCATE 1,15:FOR A=0 TO 15
50 PEN A:PRINT"PEN";A;:NEXT A:GOSUB 210
60 |MODE,1:GOSUB 170:INK 1,11,25
70 INK 0,15,14:INK 2,4,5:INK 3,22,23
80 |INK:LOCATE 1,11:FOR A=0 TO 3:PEN A
90 PRINT "HELLO";:NEXT A:LOCATE 1,15
100 FOR A=0 TO 3:PEN A:PRINT "HELLO";
110 NEXT a:GOSUB 210:|MODE,2:GOSUB 170
120 INK 1,11,5:INK 0,15,14:|INK
130 LOCATE 1,11:FOR A=0 TO 1:PEN A
140 PRINT"HELLO";:NEXT A:LOCATE 1,15
150 FOR A=0 TO 1:PEN A:PRINT"HELLO";
160 NEXT A:END
170 PRINT"DEFAULT COLOURS ARE "
180 FOR A=0 TO 15:PEN A
190 PRINT "PEN ";A;CHR$(143)
200 NEXT A:PRINT:PRINT
210 PRINT:PRINT
220 INPUT"PRESS ENTER ";A$:CLS:RETURN
```

Budgie

Ever wanted an absolutely useless program to make Arnold chirp like a budgie? Your prayers have been answered. **Ian Cookson** of Coventry has come up with an ideal solution. It may not be much use, but will teach you a little about sound production. Anyway, it's pleasant listening.

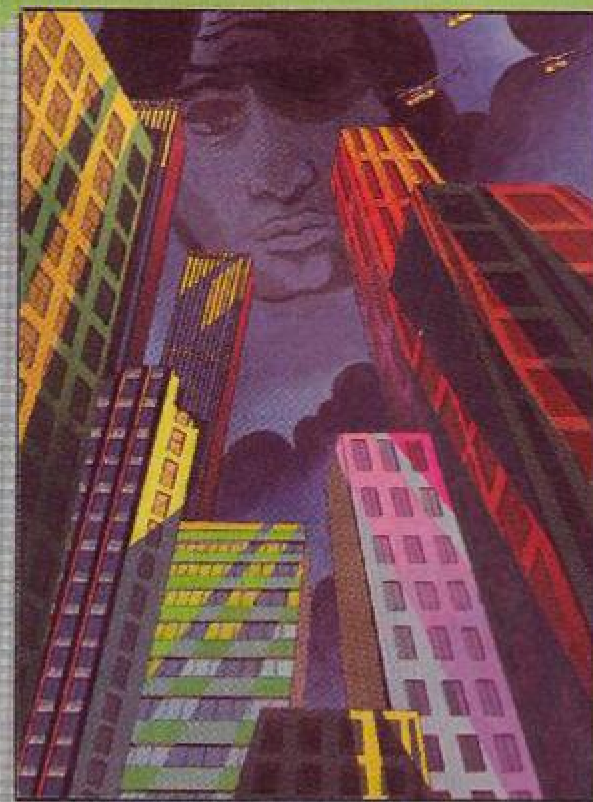
```
1 ' Budgie
2 ' Ian Cookson
3 ' Amstrad Action    Feb 87
10 ENT 1,20,1,0.5
20 ENV 1,20,0.25,1.25
30 ENT 2,30,0.5,1
40 ENT 3,20,1,1
50 ln=INT(RND*5)+1
60 FOR l=1 TO ln
70 FOR n=1 TO 3
80 dur(n)=INT(RND*9)+9
90 e(n)=INT(RND*3)+1
100 en(n)=INT(RND*2)+1
110 note(n)=INT(RND*9)+4
120 NEXT
130 SOUND en(1),note(1),dur(1),6,1,e(1)
140 SOUND en(2),note(2),dur(2),6,1,e(2)
150 SOUND en(3),note(1),dur(3),6,1,e(3)
160 FOR p=1 TO INT(RND*150)+100:NEXT
170 NEXT
180 FOR p=1 TO INT(RND*1000)+500:NEXT
190 GOTO 50
```

Rotating triangle

The following program from **Michael Pease** of Norwich is a simple wire-frame graphics demonstration. The program creates a triangular image, which it then rotates around an invisible axis.

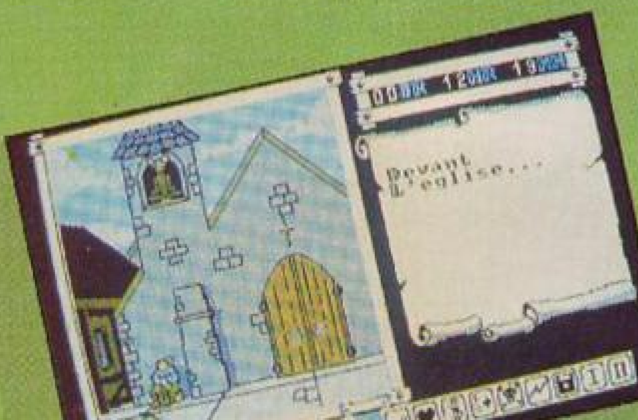
```
1 ' Rotating triangle
2 ' Michael Pease
3 ' Amstrad Action    Feb 87
10 MODE 2:INK 0,0:INK 1,26:BORDER 13
20 A=RND:B=RND:C=RND:PRINT
30 PRINT " FRAME: ";
40 DEG:PRINT "      ********** Graphic
   demo by Michael Pease ********* ";
50 PRINT "SEQUENCE:";S:LOCATE 1,3
60 FOR T=1 TO 80:PRINT "-";:NEXT
70 FOR Z=1 TO 200*7 STEP 7:F=F+1
80 AP=35*COS(Z*A):BP=35*SIN(Z*B)
90 CP=35*COS(Z*C)
100 ORIGIN 320+(AP-BP/2)*3,180+
    (BP-CP/2)*2
110 CALL &BD19:PLOT AP,BP,1:DRAW BP,CP
120 DRAW CP,AP:DRAW AP,BP:CALL &BD19
130 DRAW BP,CP,2:DRAW CP,AP:DRAW AP,BP
140 LOCATE 8,2:PRINT F
150 NEXT:PRINT CHR$(7):S=S+1:F=0:CLS
160 GOTO 10
```





KHAÂL

MANHATTAN 95





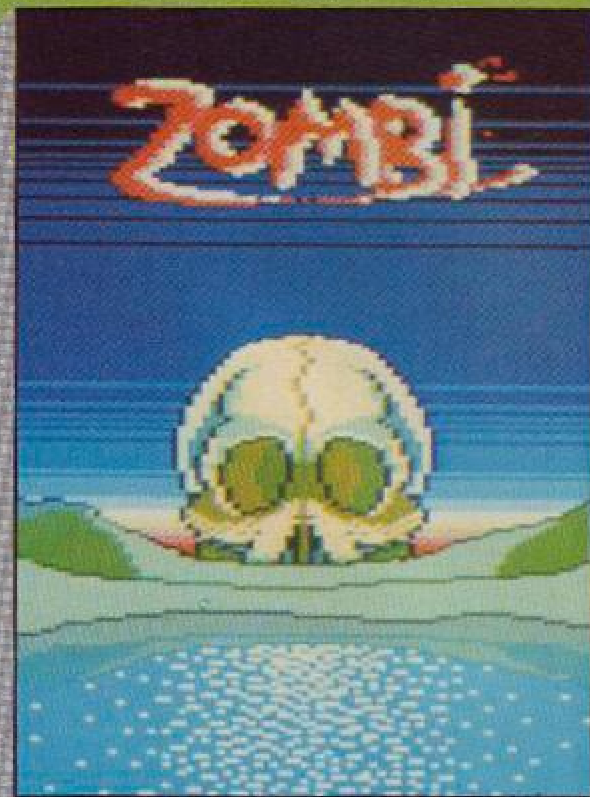
A 100 % role playing game... Come down into the fascinating and devilish world of THULYNTE. Whether you are a warrier or a dealer, you will have to fight against terrible ennemies whose only aim is to destroy you.

Forget about soapy characters and flying witches!
The most fearsome of all anti-socials has got one mission: to get the president out of the prison-like MANHATTAN. Blood will not be spared!

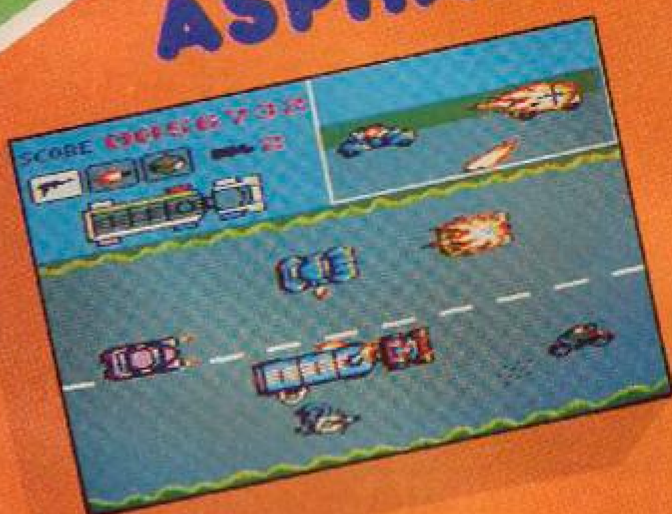
UBI Soft

1, Voie Félix Eboue
94000 Créteil - France
TEL. 010.331.43.39.23.21

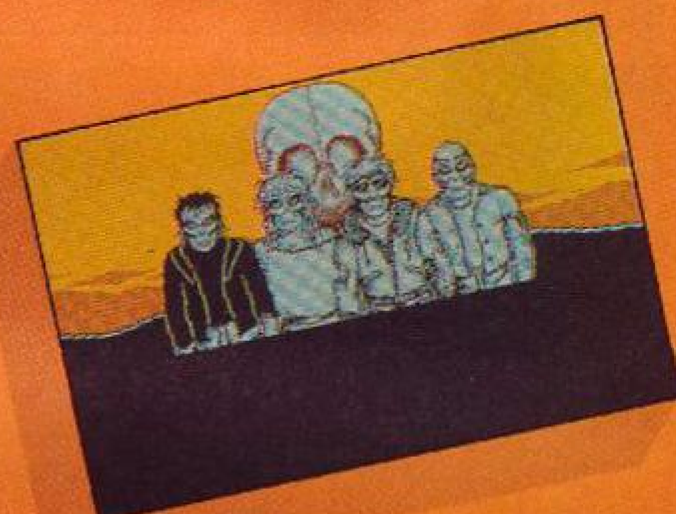




ASPHALT



ZOMBI



1991 : The year of all dangers, motorways have become bloody battle fields, full of looters of all kinds. Your mission is to drive an artic-lorry changed into a tank and to carry your cargo into safety.

When there is no space left in hell, the dead are coming back to earth... Your last possible issue is : a supermarket where you get down, body and soul, piloted by an ICON.

UBI Soft

1, Voie Félix Eboué
94000 Créteil - France
TEL. 010.331.43.39.23.21

Screen flip

Richard Turner of Northampton has provided a mini-listing that turns a screen upside-down. A simple Call to location &9C40 sets this in motion.

```
1 ' Screen flip
2 ' Richard Turner
3 ' Amstrad Action   Feb 87
10 FOR t=&9C40 TO &9CA3:READ a$
20 POKE t,VAL("&"+a$):NEXT t
30 DATA 21,00,20,01,00,C0,11,CF,FF,E5
40 DATA 0A,CB,17,CB,1D,CB,17,CB,1D,CB
50 DATA 17,CB,1D,CB,17,CB,1D,CB,17,CB
60 DATA 1D,CB,17,CB,1D,CB,17,CB,1D,CB
70 DATA 17,CB,1D,7D,67,1A,CB,17,CB,1D
80 DATA CB,17,CB,1D,CB,17,CB,1D,CB,17
90 DATA CB,1D,CB,17,CB,1D,CB,17,CB,1D
100 DATA CB,17,CB,1D,CB,17,CB,1D,7D,02
110 DATA 7C,12,E1,03,1B,2B,7D,B4,FE,00
120 DATA C2,49,9C,C9,00,00,00,00,00,00
130 ' CALL &9C40 to flip screen
```

Electronic rainbow

Messrs **Keldorff and Havmand** in Denmark have written a program that will allow you to create some totally meaningless yet satisfying effects. Using a joystick or the cursor cluster, patterns can be produced which, when the fire button or copy key are pressed, will come to life. It's done by palette switching, a CPC speciality.

If you wish to use a joystick, remove line 20. For a green-screen monitor, remove line 160.

```
1 ' Electronic Rainbow
2 ' Rasmus Keldorff & Mads Havmand
3 ' Amstrad Action   Feb 87
10 left=74:right=75:up=73:down=72:
   fx=76 ' Joystick
20 left=8:right=1:up=2:down=0:
   fx=9       ' Keyboard
30 x=320:y=202:p=1:MODE 0:BORDER 0
40 INK 0,0:FOR g=1 TO 15:READ a
50 INK g,a:p$=p$+CHR$(a):NEXT
60 WHILE INKEY(fx)=-1
70 x=x+(INKEY(left)<>-1 AND x>0)*8-
   (INKEY(right)<>-1 AND x<632)*8
80 y=y+(INKEY(up)<>-1 AND y>8)*8-
   (INKEY(down)<>-1 AND y<392)*8
90 PLOT x,y,p:PLOT x,y-2:p=p+1
100 IF p=16 THEN p=1
110 WEND:WHILE INKEY(47)=-1
120 FOR g=1 TO 15
130 INK g,ASC(MID$(p$,g,1)):NEXT
140 p$=MID$(p$,15,1)+MID$(p$,1,14)
150 WEND:RUN
160 DATA 1,2,11,20,26,23,16,7,3,6,
    15,24,22,18,9,10   ' Colour
170 DATA 20,19,18,17,16,15,14,13,
    12,11,10,9,8,7,6,5 ' Green
```

Window saver

As you know, it is possible to create windows under Amstrad Basic. These can open at any position on the screen – a maximum of seven at a time. One annoyance, though, is that if one window is defined on top of another, the contents of the bottom one are lost forever. **David Lincoln** of Beeston, Nottingham, has produced a program that will save areas of the screen into memory. These can be called back at any time – not necessarily to the same position.

To load and save a window, you are provided with two RSX commands:

```
|W.SAVE,a,b,c,d,e
|W.LOAD,a,b,c,d,e
```

In both cases, *a* is the left position of the window, *b* its right, *c* top, *d* bottom.

The final parameter, *e*, is the memory address where the window is to be stored. By varying it, you can store more than one window. Anywhere from &4000 to &6000 is as good a place as any to start storing a window. If the whole screen is saved, though, you need &4000 bytes and the start address must be near to &4000.

Obviously, the same address value must be used when restoring a window. It may be loaded back to a different screen position, as long as the height and width are not altered. For example:

```
|W.SAVE,10,20,10,20,&4000
|W.LOAD,30,40,10,20,&4000
```

will generate a second copy of the first window, 10 characters to the right.

It is possible to calculate the number of bytes needed for the window in memory: L*D*8, where *L* is the number of rows of characters in the window, and

D = (right of window – left of window)*(width of character).

The width of the character varies according to the current mode setting. It will be 1 in mode 2, 2 in mode 1 and 4 in mode 0.

To save the program as a binary file, type:

```
SAVE"WINDOW.BIN",B,&A080,&F9.
```

To reload, type in direct mode:

```
MEMORY &A000:LOAD"WINDOW.BIN":CALL &A080
```

```
1 ' Window saver
2 ' David Lincoln
3 ' Amstrad Action   Feb 87
10 FOR t=&A080 TO &A080+&F9:READ a$
20 b=b+VAL("&"+a$)
30 POKE t,VAL("&"+a$):NEXT t
40 IF b=27766 THEN 60
50 PRINT"ERROR IN DATA":STOP
60 PRINT"New commands available:"
70 PRINT"|W.SAVE,<a>,<b>,<c>,<d>,<e>"
80 PRINT"|W.LOAD,<a>,<b>,<c>,<d>,<e>"
90 CALL &A080:END
100 DATA 01,66,A1,21,7B,A1,CD,D1,BC,C9
110 DATA 2E,01,26,00,22,7E A0,C3,9A,A0
120 DATA 21,00,00,22,7E,A0,DD,6E,00,DD
130 DATA 66,01,22,78,A0,DD,7E,02,DD,46
140 DATA 04,90,3C,6F,26,00,22,7C,A0,DD
150 DATA 66,08,25,DD,6E,04,2D,CD,1A,BC
160 DATA 22,76,A0,E5,DD,66,06,25,DD,6E
170 DATA 04,2D,CD,1A,BC,50,C1,7D,91,82
180 DATA 6F,26,00,22,7A,A0,2A,7E,A0,7D
190 DATA B7,CA,24,A1,0E,08,2A,7A,A0,45
200 DATA 2A,76,A0,ED,5B,78,A0,7E,12,23
210 DATA 13,10,FA,0D,79,B7,28,13,2A,76
220 DATA A0,CD,26,BC,22,76,A0,2A,7A,A0
230 DATA 45,2A,76,A0,C3,EB,A0,2A,7C,A0
240 DATA 7D,3D,6F,22,7C,A0,B7,C8,2A,76
250 DATA A0,CD,26,BC,22,76,A0,ED,53,78
260 DATA A0,C3,DE,A0,0E,08,2A,7A,A0,45
270 DATA 2A,76,A0,ED,5B,78,A0,1A,77,23
280 DATA 13,10,FA,0D,79,B7,28,10,2A,7A
290 DATA A0,45,2A,76,A0,CD,26,BC,22,76
300 DATA A0,C3,31,A1,2A,7C,A0,2B,7D,B7
310 DATA C8,22,7C,A0,ED,53,78,A0,2A,76
320 DATA A0,CD,26,BC,22,76,A0,C3,24,A1
330 DATA 6E,A1,C3,8A,A0,C3,94,A0,57,2E
340 DATA 53,41,56,C5,57,2E,4C,4F,41,C4
```

AGRAL-86

That dynamic Danish duo, **Rasmus Keldorff and Mads Havmand** have written AGRAL – A GRAphical Language. Agral is a very short version of the well-known language Logo. These are the commands that Agral accepts:

`WALK x` move *x* units (backwards when *x* is negative)
`TURN x` turn right by *x* degrees (left when *x* is negative)
`ANGLE x` sets cursor to bearing *x* degrees
`CLEAR x` changes the background colour to *x* and clears both text and graphics screen
`PENCIL x` changes the drawing colour: 0=delete, 1=yellow, 2=green, 3=orange
`LOOP x` no nestling allowed. As the name suggests, you can repeat or loop several commands
`END` starts execution of your program

To help you on your way, here is a small routine to try:

```
> LOOP 10
> WALK 100
> TURN 90
> WALK 100
> TURN 90
> WALK 100
> TURN 90
> WALK 100
> TURN 126
> END
```

```
1 ' AGRAL-86
2 ' Rasmus Keldorff & Mads Havmand
3 ' Amstrad Action   Feb 87
10 a(1)=49152:a(2)=24576:a(3)=7936:
   MEMORY 6999:DIM i$(20):FOR g=7000
   TO 7011:READ w:POKE g,w:NEXT:
   FOR g=0 TO 7:READ w:b(g)=a(w):NEXT:
   angl=0:x=320:y=200:p=1:cy=1:
   a$="WALK..TURN..ANGLE.CLEAR.
   PENCILLOOP..":bc=0:MODE 2:GOSUB 170
   :GOSUB 150:DEG
20 IF VPOS(£0)=25 THEN MODE 2:GOTO 20
   ELSE LINE INPUT "> ";b$:b$=UPPER$
   (b$):GOSUB 100:GOTO 20
30 IF lp+ip=0 THEN GOSUB 170:GOSUB 40:
   GOSUB 140:GOSUB 160:RETURN ELSE
   IF ip THEN RETURN
40 MOVE x,y:px=f*SIN(angl):
   py=f*COS(angl):DRAWR px,py,p:
   x=x+px:y=y+py:RETURN
50 angl=(angl+f) MOD 360:RETURN
60 angl=f MOD 360:RETURN
70 GOSUB 170:angl=0:bc=f MOD 32:
   GOTO 150
80 p=f MOD 4:RETURN
90 t=f:i=1:ip=1:RETURN
100 IF b$="END" THEN IF ip THEN GOSUB
    170:ip=0:i=i-1:FOR lp=1 TO t:FOR
    h=1 TO i:b$=i$(h):GOSUB 110:
    NEXT h,lp:t=0:lp=0:i=0:GOSUB 140:
    GOSUB 160:RETURN ELSE PRINT
    "END Not Expected":RETURN
110 v=INSTR(b$," "):IF v+lp=0 THEN
    PRINT "Syntax Error":RETURN
120 FOR g=1 TO 31 STEP 6:IF MID$
    (a$,g,v-1)=LEFT$(b$,v-1) THEN IF
    ip THEN i$(i)=b$:i=i+1:IF i=21
    THEN PRINT "END To Follow":RETURN
    ELSE i=i ELSE ip=0 ELSE NEXT:PRINT
    "Unknown Command":RETURN
130 f=VAL(MID$(b$,v+1,4)):ON
    INT(g/6)+1 GOSUB 30,50,60,70,80,90
    :RETURN
140 WHILE INKEY$<>"":WEND:WHILE
    INKEY$="":WEND:RETURN
150 MODE 1:BORDER bc:INK 0,bc:INK 1,24
    :INK 2,18:INK 3,15
160 c=2:GOSUB 180:MODE 2:c=4:GOSUB 180
    :LOCATE 1,cy:RETURN
170 c=0:GOSUB 180:cy=VPOS(#0):MODE 1:
    c=6:GOSUB 180:RETURN
180 POKE 7005,INT(b(c)/256):POKE 7008,
    INT(b(c+1)/256):CALL 7000:RETURN
190 DATA 1,0,64,33,0,0,17,0,0,237,176,
    201,1,3,1,2,3,1,2,1,Machine Code
```

The 3D world

Continuing with three-dimensional perspective, we have a wire world for you, programmed by **Jason Erskine** of Newhaven. Its short size belies its execution time.

```
1 ' THE 3D WORLD
2 ' Jason Erskine
3 ' Amstrad Action    Feb 87
10 MODE 2:PLOT 320,200
20 FOR a=1 TO 360:DEG
30 FOR b=1 TO 19 STEP 2
40 PLOT 320+(190-10*b)*COS(a),200+190*SIN(a)
50 NEXT b:FOR c=1 TO 19 STEP 2
60 PLOT 320+190*COS(a),200+(190-10*c)*SIN(a)
70 NEXT c:NEXT a
```

Guidelines for Type-in authors

If you plan to send a Type-in listing to be considered for publication, here are a few pointers:

▶ Use lower-case rather than capitals for variable names. Keep them short but meaningful.

▶ Do not use letters that look like numbers as variable names: lower-case L (l), capital I or either O. Even B can look like 8 on some printers.

▶ REM statements make the program easier to understand – especially when you rediscover it on tape six months later. Put program name, source and date at the top. REM every subroutine to outline its purpose.

▶ Structure your programs – divide them into sensible procedures.

▶ Avoid long multi-statement lines. Short lines make debugging easier.

▶ Try to keep lines short enough to fit our columns without confusing wrap-arounds.

▶ And *please* make sure your name and address (in human-readable form) is on every single piece, especially the label of the cassette or disk. Keep a copy.

HOT TIPS

The page where you can help others reach enlightenment with their CPC

Fat keys for *Tasword*

If EK Scott (Problem Attic, October) really wants to use 2k for key definitions, the following short program will do the trick. Whether it will be of much use is another matter. *Tasword* doesn't leave a lot of room for files as it is, and after this program is run the whole of the tutor file will no longer fit. You get a File Full message after 185 lines.

```
10 SYMBOL AFTER 256
20 MEMORY &9F20
30 FOR a=&9F21 TO &9F2A
40 READ b$
50 POKE a,VAL("&"+b$)
60 NEXT
70 CALL &9F21
80 RUN"TASWORD"
90 DATA 11,2B,9F,21,00
100 DATA 08,CD,15,BB,C9
```

The routine can be used in any other program. It permits up to 255 characters on one key – for example, type KEY 139,STRING$(255,"A") and pressing the small Enter key will give hundreds of AAAAs.

The program can be modified quite easily to give more or less memory for expansion keys. For example, change all 9Fs in the program to 97 and change the sixth data item, 08, to 10 to get 4k for expansions.

Alex Aird
Birmingham

Putting Ascii in its place

Here is a shortish routine that I'm sure will be of interest to many readers. It can transfer Ascii files from tape to disk or vice-versa. Alternatively, you can view the text file, rather like the Type command in the CP/M operating system. The program is self-explanatory.

```
1 ' Ascii transfer
2 ' RJ Mc Gregor
3 ' Amstrad Action   Feb 87
10 |DISC:MODE 1:LOCATE 8,3
20 PRINT"ASCII TAPE/DISC TRANSFER"
30 LOCATE 1,10:INPUT"ENTER TAPE
   FILEMAME";ft$
40 PRINT:INPUT"ENTER DISC
   FILEMAME";fd$
50 LOCATE 12,19:PRINT"1 --
   Tape to Disc"
60 PRINT TAB(12)"2 -- Disc to Tape"
65 PRINT TAB(12)"3 -- Read File"
70 LOCATE 12,23:INPUT"ENTER
   CHOICE";sel
80 ON sel GOTO 200,100,400
100 |TAPE.OUT:OPENIN fd$
110 OPENOUT ft$
120 GOSUB 300
200 |TAPE.IN:OPENIN ft$
210 OPENOUT fd$
220 GOSUB 300
300 MODE 2:WHILE NOT EOF:
    LINE INPUT£9,a$:PRINT a$
310 PRINT£9,a$:WEND
320 CLOSEOUT
330 CLOSEIN
340 |DISC:END
400 LOCATE 11,25:INPUT"(T)ape or
    (D)isc";sel$:sel$=UPPER$(sel$)
410 IF sel$="T"THEN f$=ft$:|TAPE
420 IF sel$="D"THEN f$=fd$:|DISC
430 OPENIN"!"+f$
440 MODE 2:WHILE NOT EOF:LINE
    INPUT£9,a$:PRINT a$:WEND:
    GOTO 320
```

RJ Mc Gregor
Bristol

Complementing sound digitizer

I have written a program, Sound Bank, to complement Digitizer (*AA* 15) for 6128 users. It lets you store digitized sounds in the upper four banks of memory. This leaves full Basic memory untouched bar that which contains the digitizer program.

The memory available to store the digitized sound is 64k, which by my calculations gives approximately 45 seconds of sound.

Type the following in direct mode – make sure n is between 0 and &3FFF:

```
MEMORY &8FFF:LOAD "DIGITIZE.BIN"
CALL &9000:OUT &7F00,196:|R,&4000,n
SAVE"bank1",b,&4000,n
OUT &7F00,197:|R,&4000,n
SAVE"bank2",b,&4000,n
OUT &7F00,198:|R,&4000,n
SAVE"bank3",b,&4000,n
OUT &7F00,199:|R,&4000,n
SAVE"bank4",b,&4000,n
```

Each bank is saved separately, so four files will be saved to disk.

The OUT commands in this program change the bank to which data is sent. OUT &7F00,192, for example, is the CPC's normal memory. OUT &7F00,196 moves the first bank into the memory locations &4000 to &8000.

Type in the Sound Bank listing and save it to the same disc that holds both Digitizer and your digitized sounds. Sound Bank will automatically load the Digitizer code and your digitized samples – and pressing the correct keys will treat your ears.

```
1 ' Sound Bank
2 ' Andrew Walker
3 ' Amstrad Action    Feb 87
10 MODE 2:MEMORY 16383
20 PRINT"Please wait ... loading ..."
30 OUT &7F00,196:LOAD"bank1",16384
40 OUT &7F00,197:LOAD"bank2",16384
50 OUT &7F00,198:LOAD"bank3",16384
60 OUT &7F00,199:LOAD"bank4",16384
70 OUT &7F00,192:MEMORY &8FFF
80 LOAD"digitize",&9000:CALL &9000
90 GOTO 180
100 OUT &7F00,196:|P,16384,16382
110 OUT &7F00,192:RETURN
120 OUT &7F00,197:|P,16384,16382
130 OUT &7F00,192:RETURN
140 OUT &7F00,198:|P,16384,16382
150 OUT &7F00,192:RETURN
160 OUT &7F00,199:|P,16384,16382
170 OUT &7F00,192:RETURN
180 MODE 2
190 PRINT"Play bank 1,2,3,4 or
    S equential ?"
200 a$=UPPER$(INKEY$):IF a$=""
    THEN 200
210 IF a$="1"THEN GOSUB 100
220 IF a$="2"THEN GOSUB 120
230 IF a$="3"THEN GOSUB 140
240 IF a$="4"THEN GOSUB 160
250 IF a$="S"THEN GOSUB 100:
    GOSUB 120:GOSUB 140:GOSUB 160
260 GOTO 180
```

Andrew Walker
Horndean, Portsmouth

Bankmanagers are no joy

If you are a little uneasy using the Bankman utility supplied with the 6128 here are a few tips:

1. The manual states that the command for putting data into the extra ram is |BANKWRITE,@r%,a$,d where 'd' is optional. However, I have found that the correct command should be |BANKWRITE,r%,a$,d – noting that you do not use the '@'. The same applies to |BANKREAD.

2. A very useful thing to do, just before |BANKREADing, is to place the same number into SPACE$ as you used in the |BANKOPEN command, like this:

```
20 |BANKOPEN,7
30 GOSUB 1000

1000 a$=SPACE$(7):|BANKREAD,r%,a$,d
1010 RETURN
```

This allows you to use the variable a$ in other parts of your program without corrupting the length of the string data which will be put into a$ in line 1000.

3. Remember, any numerical data written to the bank must be integer format. I tried (I know, I should have read the manual) to |BANKWRITE several numbers with decimal points still in them. Of course when trying to retrieve them, all I got were integers. Example:

```
10 a=1345.678
20 a$=STR$(a):|BANKWRITE,r%,a$,d

1000 a$=SPACE$(7):|BANKREAD,r%,a$,d
1010 PRINT a$
```

The result, 1345. What I do now is multiply the number I wish to store by a sufficient power of 10 to eliminate the decimal point before |BANKWRITEing, not forgetting, of course, to divide by the same figure after |BANKREADing.

GR Andrews
Poole, Dorset

HARDBALL and TAPPER





For your CPC 6128/464





Hardball Soft 06063/07063 (Keyboard or Joystick)

Hardball puts you in the field as both player and manager with control of physical play and strategic decisions, testing your split second reactions and your planned approach to the game.

Tapper Soft 06007/07007 (Keyboard or Joystick)

You are the frenzied bartender trying to keep the never ending flow of thirsty customers well watered. There's the Old West Saloon, the Jock Bar, the Punk Rock Bar and the Space Bar. Keep the sodas coming, but not too fast.

Order your copies now at only £9.95 on tape and £13.95 on disc

Available from good Amstrad computer stockists. Or send coupon to Marketing Dept, Amstrad, Brentwood House, 169 King's Road, Brentwood. Essex. CM14 4EF.

AMSTRAD

Brentwood House, 169 King's Road, Brentwood Essex. CM14 4EF. Tel. 0277 230222

Send coupon to: Marketing Dept. Amstrad Consumer Electronics Plc, Brentwood House, 169 Kings Road, Brentwood, Essex. CM14 4EF

Name ....

Address ....

....

Post code .... Tel. No. ....

HARDBALL TAPE (06063) ☐ HARDBALL DISC (07063) ☐

TAPPER TAPE (06007) ☐ TAPPER DISC (07007) ☐

(PLEASE DO NOT SEND ANY MONEY WITH THIS COUPON)

AA/2

BOOTING UP CP/M

PART 8

A six-month recap

Booting CP/M started life during the warm month of July; the time has come for it to give up its post. This concluding part will, briefly, go over all the major issues raised in the past.

Don't worry if you are an avid reader of this series and have many unanswered questions. Send your queries to Problem Attic where we shall gladly deal with them – look, there's one this month.

Enter the operating system

Part one (issue 10) showed you how to bring CP/M to life, with examples of the CP/M operating system commands.

Those with two drives discovered that typing B: 'logs on' to drive B. Similarly A: switches back to drive A:.

To catalogue a disk, or show its directory, the command is DIR.

Type REN followed by the new filename, equals (=) and the existing filename to REName a file, i.e.

REN filename.new=filename.old

Erasing a file is simple. Enter ERA followed by the name of the file you want to be rid of:

ERA filename.abc

A final, very useful command is Type. Enter TYPE with a filename following it to display any Ascii or text file on the screen.

What's stat?

STAT was the major topic of discussion in part two – it's found on the CP/M system disk and is used to display a more detailed directory – or extended file information.

Files can have certain 'attributes' associated with them. That is, they can either be 'Directory' or 'System', and System files are normally hidden from directory displays. Files can also be 'Read/Write' (R/W), which means they can be changed or deleted, or 'Read Only' (R/O), which means they can't.

Stat can take various 'parameters' – or none at all. Simply typing STAT at the keyboard tells you how much read/write space (in kilobytes) there is left on the disk.

Entering STAT *.* will display:

RECS – one record is equivalent to 128 bytes
BYTES – length of file in K
EXT – number of 16K 'extent' blocks, and
ACC – whether the file is R/O or R/W.

Finally, the filename is displayed.

The STAT command can be used in a variety of ways. These alternatives were detailed in the third part of Booting CP/M. Used by itself it looks pretty puny, but used with qualifiers it lets you inspect and alter the whole nature of your CPC.

STAT filename – gives full details of the named file, including its size and status.

STAT VAL: – provides a list of the valid formats for STAT parameters.

STAT DSK: – lists all characteristics of the current disk drive.

STAT DEV: – lists the current assignment of physical (actual) devices to the CP/M logical devices (device assignment is explained later on).

STAT logical:=physical: – assigns the specified logical device to the specified physical device.

STAT filename $R/O – sets the specified file to read only status.

STAT filename $R/W – sets the specified file to read and write status.

Device assignment

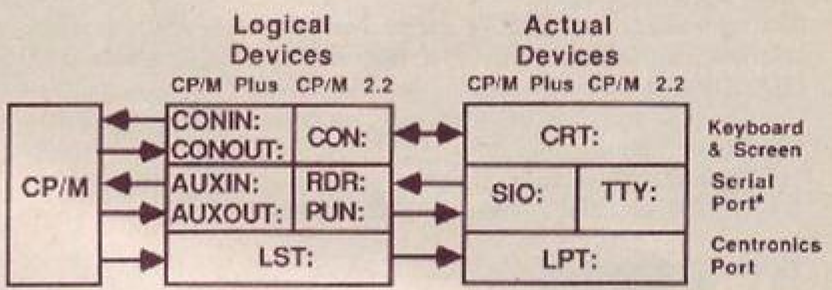
Part three also covered the obscure subject of device assignment. Your CPC system is made up of various devices – the disk drive is only one. Other elements are the keyboard, screen and any interface ports. On the Amstrad these are the printer (Centronics) port and, if you have one fitted, the RS232 or dserial port.

CP/M was not designed specifically for the Amstrad range, and runs on a variety of machines. The problem with 'portability' is that most computers have different screen layouts, keyboards and expansion ports.

CP/M takes care of this by distinguishing between 'Logical' and 'Physical' (actual) devices. Physical devices are best regarded as the actual keyboard, screen and interfaces of your computer. Logical devices are part of the CP/M operating system and are the same regardless of the computer system. CP/M operates by assigning logical devices to actual physical devices.

CP/M 2.2 has four logical devices: CONsole usually covers both keyboard and screen; ReaDeR covers the serial input device; PUNch covers serial output and LiST is usually a parallel or centronics printer. CP/M plus is slightly more up to date, having five logical devices: CONIN:, CONOUT:, AUXIN:, AUXOUT: and LST:.

Physical devices are named differently and reflect CP/M's age. The keyboard and screen are called CRT: (cathode ray tube). The serial interface is called TTY: in 2.2 standing for teletype and SIO: (serial input output) in 3.1. The printer is labelled LPT:.



*If you have an RS232 add-on fitted.

Piping Tom

The October issue of Amstrad Action dealt solely with PIP – the Peripheral Interchange Program. PIP can be found on your system disk; as its name suggests, it is used to copy files from one disk to another, or to and from peripheral devices.

Using PIP, it is possible to create your own file. Typing:

PIP A:filename=CON:

This will set the file 'filename' to take input directly from the keyboard. In other words, whatever you type at the keyboard will become part of the file. You finish the file off with CTRL Z.

Create a file, for example, containing the word 'HELLO'. If you catalogue the disk, you will see a new file in the directory.

You have now created filename. If you wish to view it, type:

PIP CON:=A:filename

The word 'HELLO' will appear on screen.

As you can see, PIP can be used to create files and inspect them, but what else? For starters, files can be dumped to a printer:

PIP LST:=A:filename

One of the most important applications of PIP is the copying of files from one disk to another. The ability to copy files form disk to disk means you can create disks with just the files you need for any given task.

If your CPC has twin drives, and you wish to transfer a file from drive A to drive B, then enter the following:

PIP B:=A:filename

It is possible to use PIP to copy files on a single drive, if you're using CP/M Plus. Unfortunately this is not the case with CP/M 2.2 – Filecopy makes a nice alternative though.

That multi-talent PIP

Part six of Booting CP/M really showed what a useful program PIP is. Not only can it copy files but, by supplying various parameters, a great deal of user-control can be exerted when transfering files from one source to another.

The format of these extra parameters goes as follows:

PIP B:=A: filename [parameter]

Take note of the syntax; the parameter must be enclosed in square brackets which are at least one space distant from the last

character of the filename. Some of the more important parameters include:
[E] – echos all transfers to the screen.
[L] – converts capital letters to lower-case.
[U] – converts lower case to upper.
[Qstring ↑ Z] – copies a file until the word or letter following Q is found.
[X] – copy non-standard Ascii files: such as basic and binary ones.

More than one parameter may be included after the main body of the PIP command:

PIP LST:=DEMO.TXT [U Qhello ↑ Z]

This command sends the file DEMO.TXT to the printer in upper-case and ending when the word 'hello' is encountered.

Copying disks and things

There is no shortage of copy-utilities available under CP/M. Part Six sifted through these with explanation where necessary.

Users of CP/M 2.2 have DISCCOPY to transfer the etire contents of one disk to another using one drive – those lucky enough to posses two drives have COPYDISC. DISCKIT2 is also available for disk copying; it has the advantage of being simple to use and can be used on either single or dual drive systems.

DISCKIT3, which operates under CP/M Plus, is very similar to DISKIT2, but makes use of the extra bank of memory to copy in larger 'chunks'. The DISKIT series has two other uses: formatting and verifying disks. Individual files can be copied with PIP or FILECOPY.

CLOAD and CSAVE transfer files from cassette to disk and vice versa. Their syntax is:

CLOAD "cassettefile",diskfile
CSAVE diskfile,"cassettefile",writespeed

It's a Setup!

The SETUP utility, described in parts Six and Seven, allows CP/M 2.2 users to configure disks to their own needs. A brief run down of the SETUP's facilities is as follows:

Initial command buffer – up to 128 commands can be executed automatically on booting CP/M.

Sign-on string – up to 253 characters can be output to the screen when starting CP/M.

Printer power-up string – directs characters to the printer on startup.

Keyboard translation table – allows redefinition of keys to suit your taste.

IOBYTE setting – device assignment, detailed earlier on.

Alternate and IY register saving – this defines whether or not the BIOS saves the alternate and IY registers.

BIOS message enable/disable – switches certain operating system error messages on and off.

Initial command buffer clear/preserve – defines whether the initial command buffer is cleared when a key is pressed.

Drive motor on delay – sets the length of time the BIOS waits before starting disk drive motor.

Drive motor off delay – sets the length of time the BIOS waits between last disk access and turning off the motor.

Stepping rate – sets the speed at which head may be stepped across disk.

Serial interface configuration – alters input/output baud rates, data bits, stop bits and parity of the serial interface.

As you can see, SETUP is extremely useful, though there is no simple way of implementing this using CP/M Plus. However, if you turn to Problem Attic, there is some explanation of executing a program from CP/M plus.

Reconfiguration is the name of the game

Unfortunately lack of space in the last issue meant that this little section got left out.

BOOTGEN and SYSGEN are two utilities that allow reconfiguration of the system tracks on a CP/M disk. Alternatively a system disk may be created from a vendor disk.

System track information is held in two different blocks on the system disk, one containing the boot sector (that is, part of the operating system) and the other holding information such as the sign-on message, key translations and disk drive parameters (information altered by SETUP).

Vendor disks are CP/M-formatted disks with blank system tracks. The conversion is achieved by invoking BOOTGEN, which reads the bootstrap and configuration information from a disk with system tracks. Once the data has been read, BOOTGEN asks for the vendor disk you wish to insert.

So far half the required CP/M information has been written to your vendor disk, the other half is installed by invoking SYSGEN in precisely the same way and following the same procedure.

SYSGEN is specific to CP/M 2.2. To copy the system tracks in version 3.1, you need COPYSYS – all prompts are displayed.

Getting technical

Those of you wishing to delve slightly deeper into CP/M should tale note of the following programs:

DUMP – this will display the contents of a file on screen. Version 2.2 displays the contents in hexadecimal only, wheras 3.1 shows both Ascii and hex. To dump a file, type:

DUMP filename

LOAD (2.2)/HEXCOM (3.1) – converts a file assembled with ASM into a COM file which can be run independently. The command is:

LOAD filename
or
HEXCOM filename

depending on which operating system you're using.

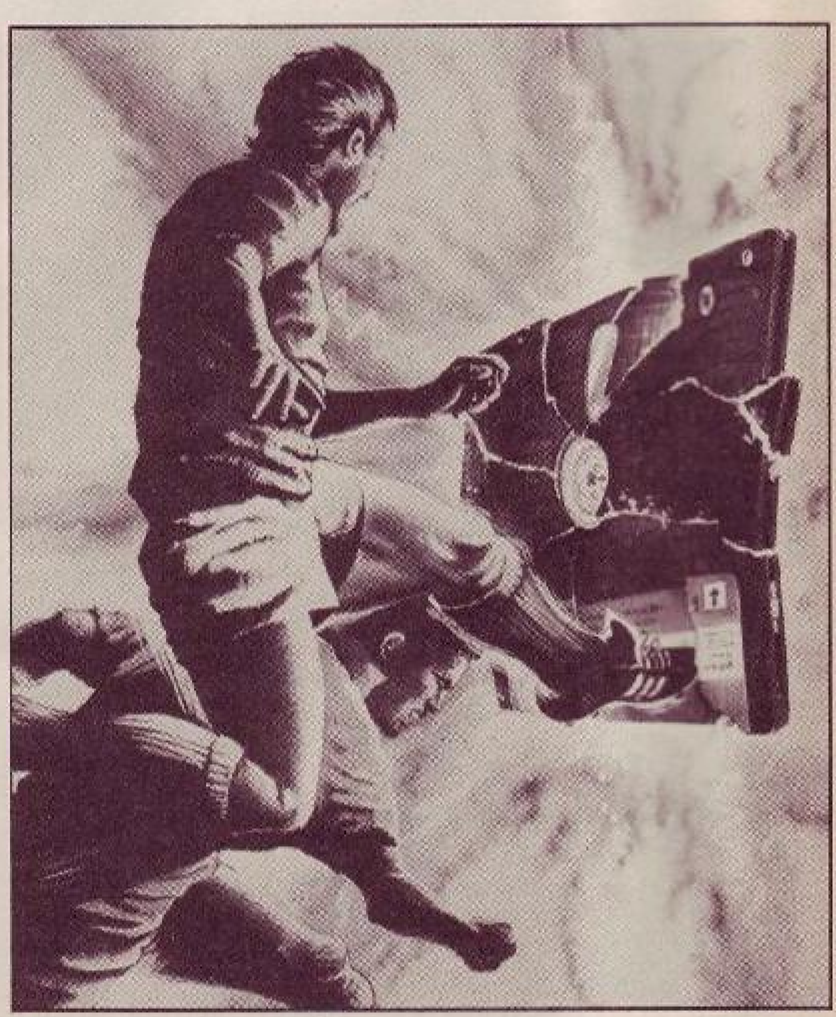
DDT – standing for Dynamic Debugging Tool, has many handy functions for the programmer/hacker. DDT allows you to run, inspect and modify 'object' code. For an in-depth look at this subject, refer to the last issue.

A legal exit!

There is one particular file on the CP/M system disk that allows you to exit legally (?) from CP/M and return to the native Amstrad disk operating system (or Basic, if you prefer). Go on try it: at the A> prompt enter:

AMSDOS

As far as I'm concerned, AMSDOS.COM is a waste of 1k of valuable disk space. Just pressing Shift, Control and Escape all together works wonders. On that note...



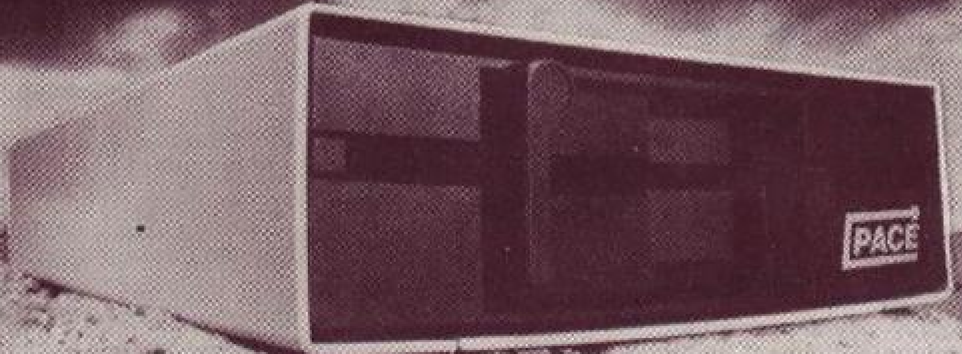
800K DISC CAPACITY FOR THE 6128 and 8256

THE BIG BYTE SOLUTION!

If you are thinking of another 3 " drive for your Amstrad think again! Because the 5¼" second drive from Pace offers so much more:

- Lower price
- Massive 800K capacity*
- Simple plug in connection
- Free utilities disc
- Uses cheaper 5¼" floppy discs
- Unmatched Pace quality.

The addition of a Pace large capacity drive enables access to a host of CPM software available on the 5¼" format. Every disc drive comes complete with free utilities on disc, one of which will enable text files created on an IBM under MSDOS to be read and written to on the Amstrad 6128 or 8256.



Pace disc drives are renowned for their high quality, and are specified exclusively by many educational establishments. Built to last, they feature precision mechanisms and all-metal cases to ensure the highest levels of data integrity.

*With CPM Plus.

PACE

Available from your local dealer or direct from Pace. For more information contact:

PACE Micro Technology
Allerton Road, Bradford, West Yorkshire. Tel. 0274 488211. Telex No. 51338
Prestel Mailbox No. 274 729306. Telecom Gold Mailbox No. 79: PCE 001
Int. Tel. No. +44 274 488211

NEW MIRAGE IMAGER MK 111



The only AMSTRAD Officially Approved Copier.

Amstrad owners can now transfer any program to disc or tape at the touch of a button. 64K in just 14 secs. from disk. The New MK111 is much faster loading with unbelievable compression using less space on your disk. Undoubtedly the best copier available today and the Only one recommended by the Amstrad Users Club. Don't settle for less.

Please state your Amstrad No. CPC464, CPC664 or CPC6128

MIRAGE Microcomputers Limited

In case of difficulty order directly from:
Mirage Microcomputers Ltd.
24 Bank Street, Braintree, Essex CM7 7UL
Tel: Braintree (0376) 48321
Telex No. 937400 Ref. 28238001

VISA · Access · American Express

Available from good retailers everywhere

£49.95

Existing Mirage Imager Owners Update you model for just **£5.95.**

Dr Patrick Harkin, a lecturer at the University of Leeds pathology department, uses a wide range of computers – micros to mainframes – for medical teaching. He has been recommending the Amstrad range even in the most staid *British Medical Journal*.

A day in the life: Surgical support

7am The post arrives. A letter from the editor of *AA* asking me to write for 'A day in the life' – nice – and a bank statement – not so nice. All my friends assume I use a financial program to keep track of my bank account. Since NatWest has invested millions in hardware and software to do just that, it seems churlish of me to duplicate the effort.

9am This morning I am lecturing to a group of medical students. It is a complex lecture, so I have a handout for them. I wrote it on my 6128 using *Protext* and *Prospell*. It is text only. It would be very useful to be able to include graphics, so as soon as I saw the adverts for *AMX Pagemaker*, I ordered a copy and bought an AMX mouse. Four months later, no *Pagemaker*, and no reply to my letter about the bugs in *AMX Art*. Serious software seems just as hyped and over-promoted as games.

10:05am In my pigeonhole I find a letter from the coroner asking me to give evidence at an inquest. I call up my original report on my office 6128 to refresh my memory.

11am One of my current research interests is a computer-based audit of hospital autopsy practice. This is done on our university mainframe as the statistical processes used take a minimum of 4 megabytes of ram! We have just finished our preliminary study and are ready for the final run of the data program.

11:10am *Bleep!* (My radiopager, not editorial censoring!) As a hospital doctor, I am involved in patient care and occasionally have to respond to urgent requests from clinicians. This is a call for a fast opinion on a breast tumour. The patient is still in theatre, and depending on the report will have either a simple removal of the lump or a major operation. This one is benign.

12:40pm Squash. I'm trying to lose some weight and get fit. Sitting in front of a keyboard or a microscope all day is making me podgy!

2pm Teaching. I have responsibility for a computer-based learning project in this department. We use a network of BBCs, as they were the best value for money when we started work on the project four years ago. I'm not sure what I'd choose if I was starting again today – the new PC1512 looks very interesting. There are 12 teaching stations, each of which is fitted with a computer-controlled slide projector. At Leicester they are using a similar system with videodisk. I wrote the control software for both machines as a sideways rom chip.

4pm Time to do some writing. Articles published in medical journals are written in a standard format with a list of references to other articles at the end. Every research worker keeps a list of interesting articles, so that when the time comes to publish new work, they can be referred to. The trick is to keep references on, say,computer-assisted learning separate from references on other subjects. I keep a list of all my references on *Masterfile*, with a keyword system which allows me to select relevant references; I can then 'export' them from *Masterfile* and put them at the end of my paper, which I am writing using *Protext*.

6pm Home! Dinner and relaxation. I quickly read the journals – two good articles in the *British Medical Journal*, and an infinite-lives poke for *Jack the Nipper* in *AA*. That will come in handy! I'm a closet gamesfreak, but I can't devote the hours you need to become *really* good, so these pokes are great! I got into computers 10 years ago, just after I started university, playing a game called *Star Trek* onone of the mainframes. This was a strategy game, rather than a shoot-em-up, and it was written in Basic. I learnt Basic by studying the listing and adding bits. From there I moved on to Algol and Pascal, then with the advent of the microcomputer I moved back to Basic and then to machine-codes – first Z80 and then 6502. My first micro was an Exidy Sorcerer, then a Dragon 32, Spectrum 48K and finally a CPC 6128. The others are all hidden in cup- boards around the house.

8:20pm Feet up in front of the telly waiting for *St Elsewhere* (well, *I* like it) when I suddenly remember – I didn't get back to the project statistics after that urgent case this morning, and they have to be ready for 9 o'clock tomorrow. All is not lost! With an acoustic coupler and *Mini Office II*, I can log on from home, run the program and get the results back. I can't do proper plot outputs at home (not at £100,000 per Versatec plotter I can't!) but by shifting the data into *DR Graph*, I can manage a reasonable print out on my Citizen 120D dot-matrix. And it's done in time for *St Elsewhere!*

11:20pm And so to bed with a cup of tea and *Amstrad Action*. That reminds me – that article. But what do I do that's of any interest to an *AA* reader? I'll think about it tomorrow. *Zzzzzzzzz...*



Absolute Beginners

Andy Wilton's course for Basic novices comes to an end: tying it up with strings

In the first of *Absolute Beginners* we learned how to use the PRINT command to make Arnold display messages on his screen. Since then we've seen how PRINT can also tell us the value of variables and expressions while a program is running.

Commands like PRINT which make Arnold tell us or show us things are called *output commands.* They are vital to our programs; without them we wouldn't know whether the programs had done what we wanted, or even if they'd done anything at all. If you look at this program:

```
10  a=12: b=8
20  c=a+b: d=a-b
30  PRINT c*d
```

you should see what I mean. Imagine the program without that last line. Arnold would still do the arthmetic in lines 10 and 20, but you wouldn't know what answers he had come up with.

So much for output. In this last *AB* we're going to look at the other side of the coin. Instead of commands that make Arnold tell us things, we'll be meeting commands to make him ask us things – what are known as *input commands.*

"THE COMMAND 'INPUT'

The most important input command is simply INPUT. It makes Arnold ask us what value we want a variable to have. Type this program in and run it:

```
10  PRINT "Enter a number"
20  INPUT a
30  PRINT "The variable 'a' now has the value"; a
```

After the message from line 10, Arnold puts up a question mark and a flashing cursor. The program hasn't finished yet – Arnold would have put up the 'Ready' prompt if it had. Rather, Arnold has reached the INPUT command in line 20 and is asking you what value he should give to the variable 'a'.

Just type in a number, 15 say, and hit Return (or Enter on a 464). That tells Arnold you're finished entering the number, and he can carry on with the rest of the program.

Line 30 prints out a message telling you what the value of the variable 'a' now is. It will in fact be the number you typed in at the '?' prompt – 15 or whatever. That's because the moment you hit Return after typing the number in, Arnold assigns that number to 'a'. If you type in the number 15, line 20 acts from then on as if it were:

```
20  a=15
```

The difference is that with a simple 'a=15' assignment you have to choose the value of 'a' at the time you write your program. INPUT on the other hand lets you make that decision when you run the program, and that can be very useful indeed.

As a demonstration, try this little times-table program out. It's very like one we tried earlier on in the series, when we were looking at loops:

```
10  a = 1
20  WHILE a<>0
30  PRINT "What times-table do you want";
40  INPUT a: PRINT: PRINT a; " Times Table"
50  FOR b = 1 TO 10
60  PRINT b; " Times ";a; " is "; a*b
70  NEXT b
80  WEND
```

This will print out a times-table for whatever number you enter at the line-40 input. It'll then prompt you for another number, print out the times-table of that and so on, until you enter the number 0. Then it'll print out the 0-times table and stop.

Notice how the WHILE-WEND loop checks to see whether or not 'a' has the value of 0. Notice also the assignment 'a=1' in line 10. This is to make sure 'a' isn't 0 when Arnold reaches the WHILE in line 20 for the first time. If 'a' was 0 at that point, Arnold wouldn't go through the loop at all and the program would finish.

There are lots of other uses for this kind of INPUT: asking you what size the program should draw a shape, for example, or the number of times it should draw it. Now though, I want to go on to a rather different topic.

STRINGS AND THINGS

Type in this listing – you probably won't need to run it to see what it does:

```
10 PRINT "This is an Amstrad CPC"
20 PRINT "Amstrad CPCs are useful things"
30 PRINT "I use my Amstrad CPC a lot"
```

Nothing dazzling, you'll agree. Now edit and add lines until the program looks like this:

```
 5 a$= "Amstrad CPC"
10 PRINT "This is an ";a$
20 PRINT a$;"s are useful things."
30 PRINT "I use my ";a$;" a lot."
```

Run that to see what it does, and then edit line 5 to read:

```
5 a$ ="Arnold"
```

Run it again, and notice the difference in the output – the messages Arnold prints on the screen. In other words, what's going on?

Well, 'a$' is acting like a variable. It's just a name taking the place of an operand. In each of lines 10-30 'a$' takes the place of part of the printlist. What's new here is that 'a$' is taking the place of a piece of text, rather than a number.

Things that stand in for numbers are called *numeric variables* or simply variables. Things that stand in for pieces of text are called *string variables*, or *strings* for short. Their names can be letters or words, but they're always followed by a dollar-sign ($) to distinguish them from numeric variables. We pronounce the dollar-sign 'string', so if you saw a string-name written elephant$ you'd call it 'elephant-string' out loud.

Line 5 of our program assigns a value to 'a$'. String assignments work exactly the same way as numeric variable assignments: you have the string name to the left of the equals-sign and the value you're assigning to it on the right. The value is a piece of text enclosed in double quotes, like this:

```
a$ = "Arnold"
```

NOTES ON QUOTES

The quotes aren't part of the value, and won't show up when you do a 'PRINT a$'. They're only there to show where the value starts and finishes.

The value of a string can include spaces, mathematical symbols or punctuation-marks as well as the more normal letters and digits. Don't try using double-quotes in a value, like this:

```
a$ = "Say "BOO" to a goose"
```

Arnold will mistake the second double-quote for the end of the value, and give you a syntax error message when he tries making

sense of B00" to a goose". Single quotes are okay in string values, though, so you can use those instead.

You can assign from one string to another – try this new line 5 out:

```
5 b$ = "Amstrad " : c$="CPC": a$ = b$+c$
```

This isn't really adding; 'b$+c$' means 'b$ joined to c$'. When you're joining strings like this, order is important; b$ + c$ has the value "Amstrad CPC" but c$ + b$ is the less useful "CPCAmstrad". (Spaces typed in the right places within the double-quotes can be useful!)

Joining strings together is properly known as concatentaion. Most people still say 'joining' or 'adding', but it's as well to know the proper term even if you never use it.

INPUTTING STRINGS

Just like numeric variables, strings can be assigned to by INPUTS. Try this program out:

```
10 PRINT "What is your name";
20 INPUT name$
30 PRINT "Hello,"; name$;"! My name's Arnold."
```

There are more useful things you can do by inputting strings. Take a look at these few lines:

```
90 PRINT "Do you want to carry on";
100 INPUT reply$
110 IF reply$ ="no" THEN END
```

Notice how in both these examples Arnold prints the *prompt* – the question your input is supposed to answer – complete with a question-mark, even though neither PRINT message has one.

The question-mark doesn't actually come from the PRINT command at all – it's actually put up there by the INPUT, immediately before you get the flashing cursor. If you want to prove this for yourself try deleting line 10 in the first example, or line 20 in the second.

Of course without the prompt messages your program is much harder to use. A bare question-mark doesn't tell you what information you're supposed to input, or even whether it's a string or numeric variable the INPUT is assigning to.

To make programs friendly and pleasant to use, you'll almost always want Arnold to print some sort of prompt message before putting up the input cursor. Input prompts are so common, in fact, that Basic makes special provision for them. Instead of using a separate PRINT statement before the INPUT, like this:

```
10 PRINT "What's the capital of Baluchistan";
20 INPUT capital$
```

You can do the whole thing with an INPUT statement alone, like this:

```
10 INPUT "What's the capital of Baluchistan";capital$
```

This saves a bit of typing effort, but more importantly it makes your program more readable. In the second version it's obvious at a glance that the Baluchistan message is a prompt.

There is a reason, though, why you might still want to use a separate PRINT command as in the first version. Imagine you want to vary the prompt according to circumstances, or previous inputs perhaps. If you try doing that with just one INPUT, you'll come a-cropper. Take a look at this attempt:

```
10 INPUT "What's your name"; name$
20 INPUT "What's the capital of Baluchistan, ";na
   me$;capital$
```

It's supposed to produce a dialogue like this:

ARNOLD: `What is your name?`
YOU: `Archibald`
ARNOLD: `What's the capital of Baluchistan, Archibald?`

Unfortunately, when Arnold sees that 'name$' in line 20 he assumes that's the string you want the INPUT command to assign to. To avoid this you'll have to do the second prompt and input longhand, like so:

```
20 PRINT "What's the capital of Baluchistan, ";name$
30 INPUT capital$
```

The prompt-message of an INPUT command is the only place I know where you can't use a string-name or string-expression (like a$ +" CPC") to replace a piece of text in quotes.

MULTIPLE INPUTS

Where you want two or more pieces of inforation to be input at the same time, you can use a multiple input like this one:

```
10 INPUT "What coordinates do you want";east,north
20 PLOT east,north,1
```

When the prompt comes up, type in a number between 0 and 399 for the point's height, and finally hit Return.

Arnold uses the comma to work out where the digits of east's value end and those of north's value start. Try typing in only one number and seeing how Arnold responds. Then try typing in three or four, all separated by commas.

This is all very well as far as numeric INPUTS are concerned, but what about strings? Strings can contain commas, so what happens if Arnold finds a comma in the text you enter at an INPUT command?

The comma could mean one of two things. It could mean 'I want the string's new value to contain a comma' or it could mean 'This is where one string calue ends and the next begins.'

Arnold solves the problem quite simply. As far as he's concerned, any comma he finds in your reply to an INPUT is meant to separate strings. If you want him to treat commas as part of string values, you must use the command LINE INPUT. (LINE and INPUT must have a space between them.)

Try this little program out – it should show you the difference between INPUT and LINE INPUT:

```
10 INPUT "Well";a$
20 PRINT a$
30 LINE INPUT "Well";b$
40 PRINT b$
```

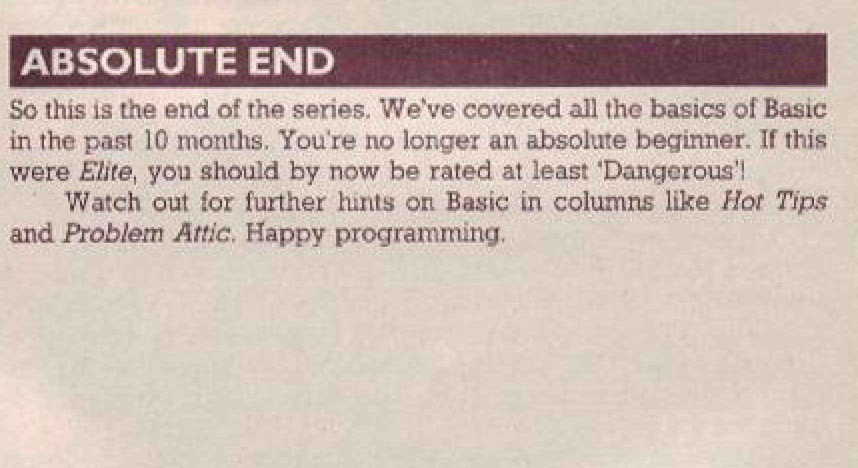
Run the program, and to each "Well?" type in the reply 'What does happen after the comma, I wonder?' Arnold will then print out however much of this input each command could handle.

As you can see, the whole of your input goes into the LINE INPUT string, comma and all. You can input only one piece of information at a time with LINE INPUT, and that must be a string value. Otherwise the command behaves just like the simpler INPUT.

ABSOLUTE END

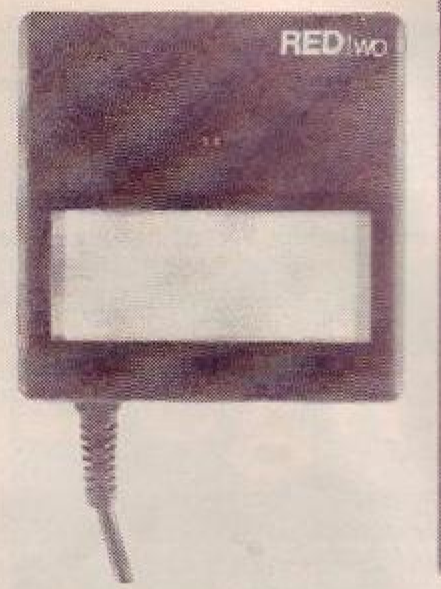
So this is the end of the series. We've covered all the basics of Basic in the past 10 months. You're no longer an absolute beginner. If this were *Elite*, you should by now be rated at least 'Dangerous'!

Watch out for further hints on Basic in columns like *Hot Tips* and *Problem Attic*. Happy programming.



REDS IN CONTROL

Let Arnold automate your abode via the mains. Jim Nagel investigates





Red Boxes
General Information Systems, £129 starter pack

A new hardware add-on can put your computer to work on a whole new range of useful applications: home automation.

Called simply Red Boxes, the gadgets can turn lights on and off, limit the kids' TV viewing, detect intruders or carry out many other tasks you could invent.

'Control' applications of this sort have been dreamt about for years by home-micro enthusiasts. Do-it-yourself projects involved festooning the house with wires – not to mention tying up the computer. While controlling the washing machine, it couldn't be doing anything else.

The double genius of the Red Boxes, however, is that they need no special wiring: they send signals along the mains wire. And once you've typed instructions on your Amstrad you can leave Red Leader, which contains its own microprocessor, to keep the other Red Boxes under control while Arnold goes back to playing *Starglider*.

The starter pack contains three of the boxes, sure enough in bright red livery – each with a red flex, a red mains plug and a red indicator light. And a 50-page user guide in red covers.

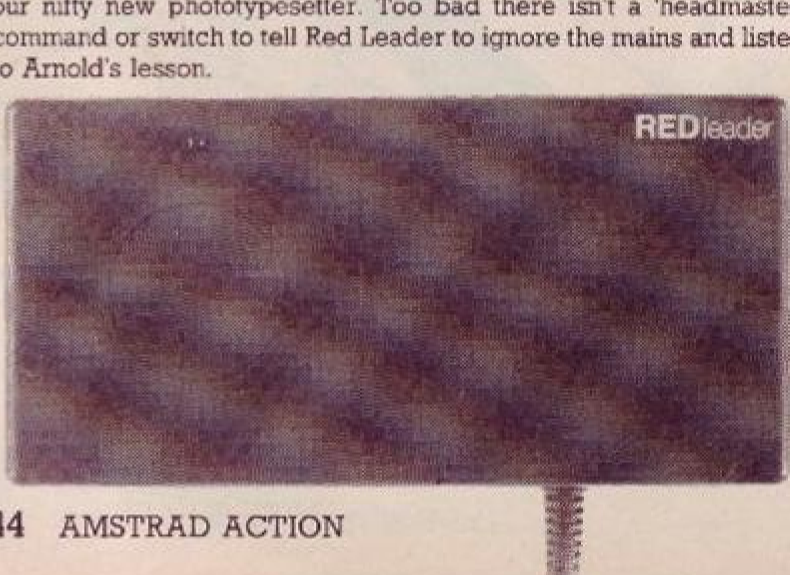
The one designer-labelled Red Leader is the brains box. The others are simply called Red One (same size, but with a 13-amp socket) and Red Two (half as long, with an infra-red motion detector). All have a tiny, almost-invisible override switch.

The only things not red are a cassette, and a peculiar lead: at one end a DIN plug and at the other a rather naked edge connector, only three of its 17 pins needed. To wall-mount any of the units, brackets are provided – not red.

The *printer* port, surprisingly, is used on the Amstrad CPCs. That's where the edge connector goes, and the DIN plug into Red Leader. In effect it's a clever serial link without a £50 serial interface. (On the other hand, if you have a printer, you'll have the annoyance of unplugging it to talk to Red Leader.)

The cassette contains a program to turn Arnold into a terminal for Red Leader. It has its own CPU chip (a 6502) and 8k of ram; it takes over Arnold to gain keyboard, screen and filing system. Load this cassette first, for powering up Red Leader at the mains triggers communication. Then in about five seconds a menu screen for Red Control Program appears. This is the simpler of the two ways to program the system.

At home the system worked fine, but in the office messages took forever to travel between Arnold and Leader. This apparently is due to 'noise' on the mains, perhaps from fluorescent lights and our nifty new phototypesetter. Too bad there isn't a 'headmaster' command or switch to tell Red Leader to ignore the mains and listen to Arnold's lesson.



The first thing is to 'install' or register serial numbers of other red devices. Since signals are sent along mains wires, every Red Box must have a unique secret identity and understand only the messages meant for it. Mrs Smith next door, if she has Red Boxes too, won't set off your burglar alarm when she intends to warm her bed electrically.

From the menu you should also set the clock to the correct time (a battery back-up for the clock is available as an extra). Selecting any remote device, you can set it on or off, or specify a time for it. Or you can make one red device control another. All this be stored on disk or tape.

For more elaborate applications – such as making the central heating come on oftener during weekends than weekdays if Red Two detects people moving, otherwise turning on lights and radio now and then to fool burglars – you can quit the menu and use the built-in Red Basic. It's a full version of the language – including even graphics plotting – plus extras like `TELL("lamp",ON)`. The command `EVERY x` gives a handy way to interrupt the main program every so-many seconds.

The user guide is generally clear, but for heavy programming you'd want the 220-page Project Manual costing another £10. Neither, however, demonstrates the system's potential well enough. I'd have expected more sample programs in Red Basic.

General Information Systems has more Red Boxes on the way: an analogue-to-digital converter and an RS box (two computers could communicate down the mains at 2400 baud). Red Five is already available: a 160dB warbling alarm. Ones, Twos and Fives cost £35 each. As a starter I'd ask for two Ones with Leader rather than the standard pack.

Red Boxes are a system that could provide a lot of fun as well as practical purpose. But I would soon think of uses for more than the budget would bear.

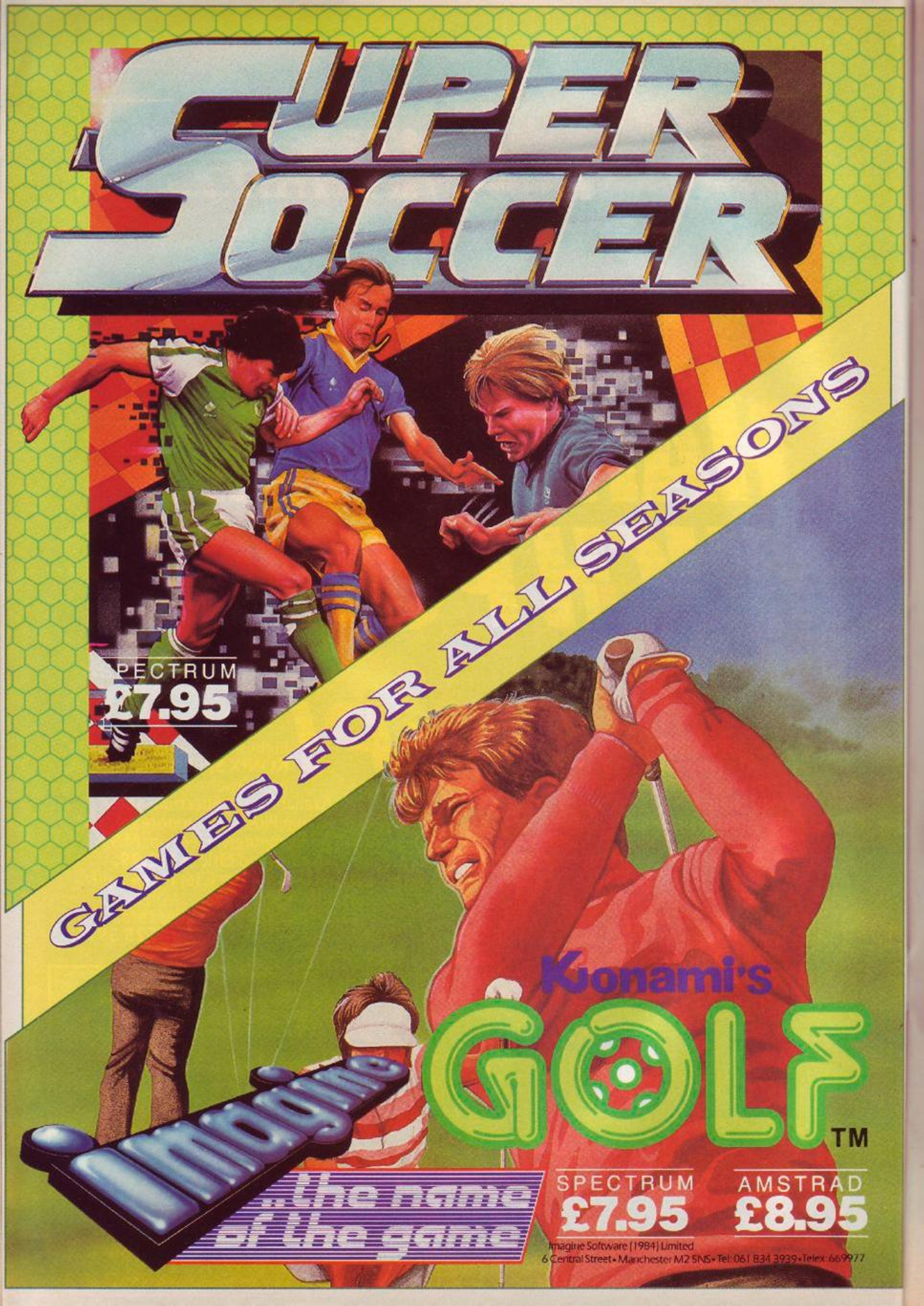
General Information Systems Ltd
Croxton, Cambridgeshire, PE19 4SY
distributor: **Electronic Fulfilment Services Ltd**
Chesterton Mill, French's Road, Cambridge, CB4 3NP

GOOD NEWS

- ▶ A completely different field for your micro.
- ▶ Control any number of appliances.
- ▶ No extra wiring.
- ▶ Your Amstrad is free to do other things.
- ▶ Versatile programming language, mostly familiar Basic.
- ▶ Other Red devices coming soon.

BAD NEWS

- ▶ Expensive.
- ▶ Starter set is enough for only one application.
- ▶ Project Book costs extra.
- ▶ Not enough program listings.
- ▶ Suffers if mains are noisy.



SUPER SOCCER
SPECTRUM
£7.95
GAMES FOR ALL SEASONS
Konami's
GOLF
TM
Imagine
..the name of the game
SPECTRUM
£7.95
AMSTRAD
£8.95
Imagine Software (1984) Limited
6 Central Street • Manchester M2 5NS • Tel: 061 834 3939 • Telex: 669977

ACTION TEST

New Year Knockouts

The games just kept on coming this month. We've reviewed over 30 titles that should bring good cheer to the New Year. The Mastergame is *Starglider*, another classic vector-graphic game with shoot-em-up action, strategy and much more. There's also the usual strong supporting cast, including the scariest game ever – *Aliens*.

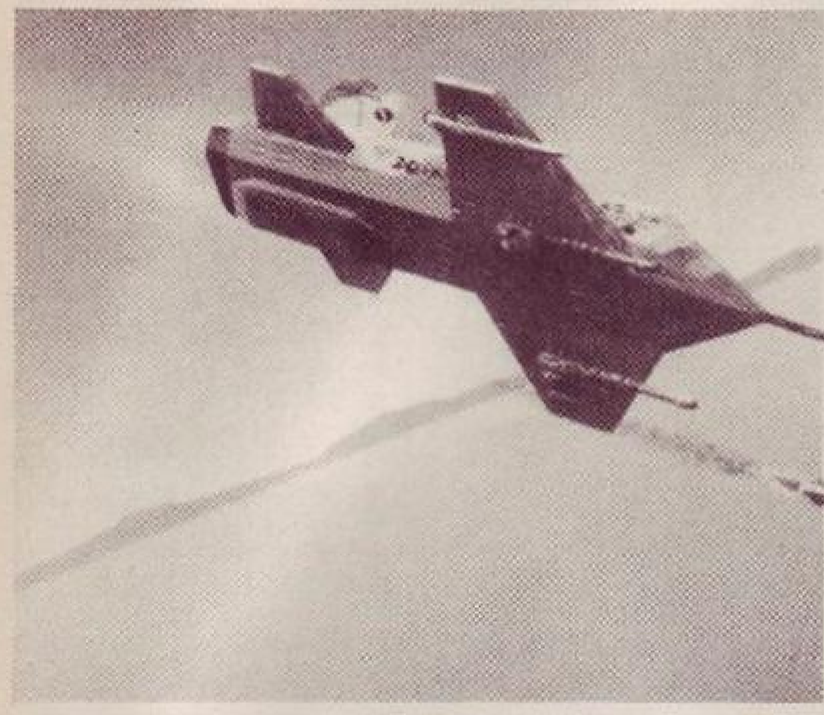
Among the other raves is Elite's latest arcade conversion, *Space Harrier*, one of the fastest games you'll ever play, and *Hive* from the same programmers who produced *Elite*. There's an excellent game from Palace, *The Sacred Armour of Antiriad*, and a very colourful 3D arcade adventure called *Palitron*.

There are piles of other games that may catch your eye, with the software houses setting a very high standard again. Check out the reviews to see which one might be right for you.

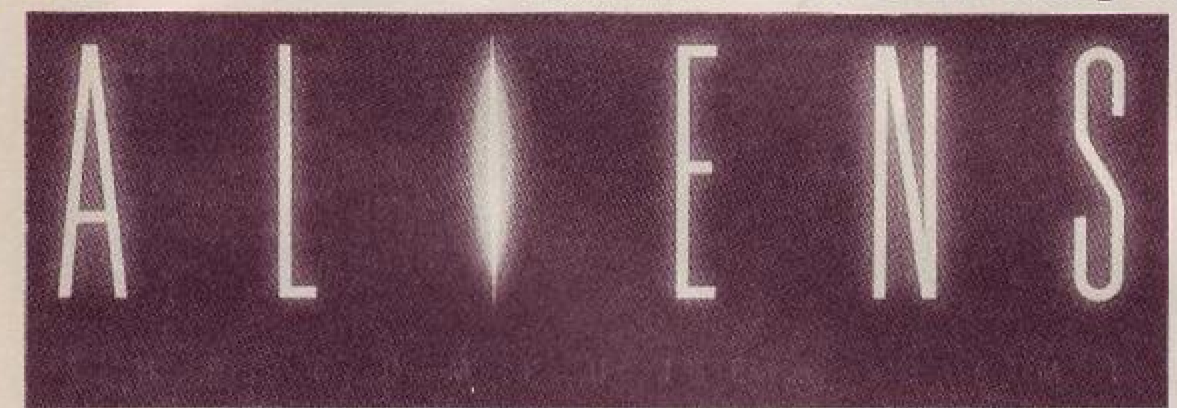
There's also a new feature called *Summary Section* in which we provide short resumés of some new games. They've all been extensively played in the office and given Good and Bad News, Ratings and a Green Screen View.

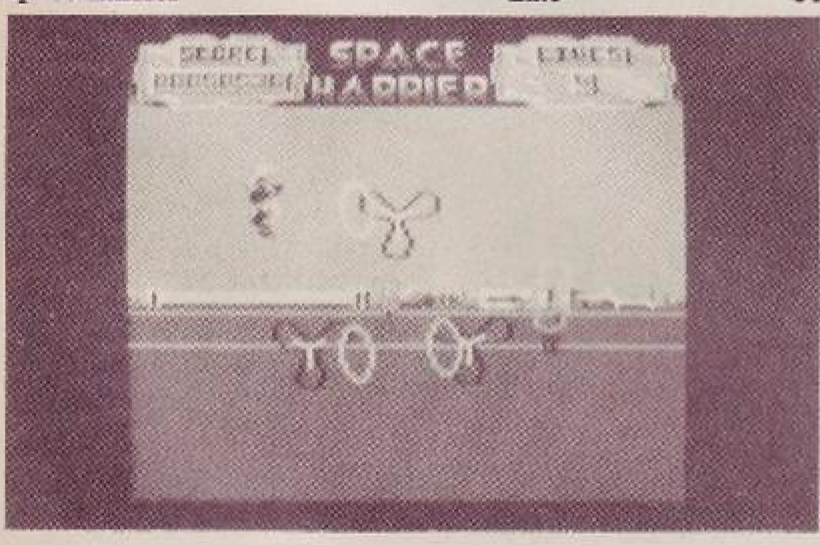
There's never been a better time for Amstrad games, so go for 'em.

MASTERGAME



RAVES





GAMES TESTED

ALIENS

Electric Dreams, £9.99 cass, £14.99 disk, joystick or keys

You shuddered at *Alien* the film, you couldn't tear yourself away from its sequel, and now you're going to be utterly terror-stricken by the computer game. It isn't gory, you'll be pleased to hear, but it has atmosphere that will envelop you and turn you into a twitching, panicking wreck. I kid you not.

If you want to know the plot, go see the film. Suffice it to say you control six characters inside a base crawling with aliens. Your task is unspecified, except for staying alive, but if you see the film or study the game map it should be obvious. When you feel up to it, you can enter the game and be greeted by an eerie, foreboding welcome – if you've got the sound turned up.

Throughout the game there is a soundtrack, not musical, but full of effects, noises and rhythms. It sets the atmosphere beautifully.

You start with the six characters all in the same room, the soundtrack seems to warn you of the nasty surprises that lie in wait.

You control one character at a time. The top half of the screen is a view of what the character sees, relayed to you through a camera. The bottom half is a status display showing who you currently control, his or her health, ammo, and the status of the other five characters. Each character carries a weapon that can be aimed using a cursor on the camera view, but this has only limited ammo.

You can control a character only for a limited time because energy runs out. When it has gone you'll have to switch to another character while it builds up again. This means you can't just guide one person through the complex without stopping. Indeed you'll quickly realise that the best strategy is to try to move everyone through in support of each other.

Each location consists of futuristic panelling and doors, which you can scroll jerkily across the screen using the cursor. It's as if you're swivelling around in the middle of the room. You can move through the doors into the next room, but you'll need to refer constantly to the map and concentrate hard in order not to become disoriented.

If you enter a room containing an alien the proximity meter sounds an urgent warning and throws you into a panic. You have to scroll quickly around the room to find the alien walking around and then shoot it. If you leave it too long or miss with your shot, the alien will head straight for you. If you miss him again the crew member concerned will be the main course for alien supper.

If you don't shoot at an alien it will eventually capture the crew member and after a time impregnate her – or him. At this point they are without hope but before impregnation you have the chance to rescue them by getting another crew member to the scene to kill the alien. Dealing with aliens is the hardest part of the game: with sirens sounding and an alien heading straight for you, panic takes hold every time and can easily make you miss your shot.

Apart from the exploring and fighting there are several other important features. Bio-mechanical growth that appears in rooms containing aliens will grow and attract more aliens and cause some other nasty side-effects. Aliens can release acid blood when shot; this can block your path because it kills on contact.

Doors can be locked or blasted through. You can even program crew members to move through rooms automatically while you're busy controlling someone else.

I actually enjoyed the game more than I did the movie: it's got so much atmosphere that you really get totally involved in the action.

The only niggle I have with it is the jerky scrolling, but this won't spoil the gameplay. It's a real tough nut to crack. Although the gameplay seems simple at first it requires a good deal of strategy to get very far. **BW**

SECOND OPINION

Fantastic! Aliens is a game I can really appreciate, having seen the film. Snippets of music, unearthly clanging noises and alien sounds pulsate through the speaker. The atmosphere is intense and will hold you in a deathly grip. When spotting an alien, I stabbed viciously at the fire button, terror and panic so strong it caused irrational feeling. This is one game I'm going to see through to the end... **RpM**



GREEN SCREEN VIEW

Very clear and eerie. The aliens look just right in green. **BW**

FIRST-DAY TARGET SCORE

Reach the armoury

GOOD NEWS

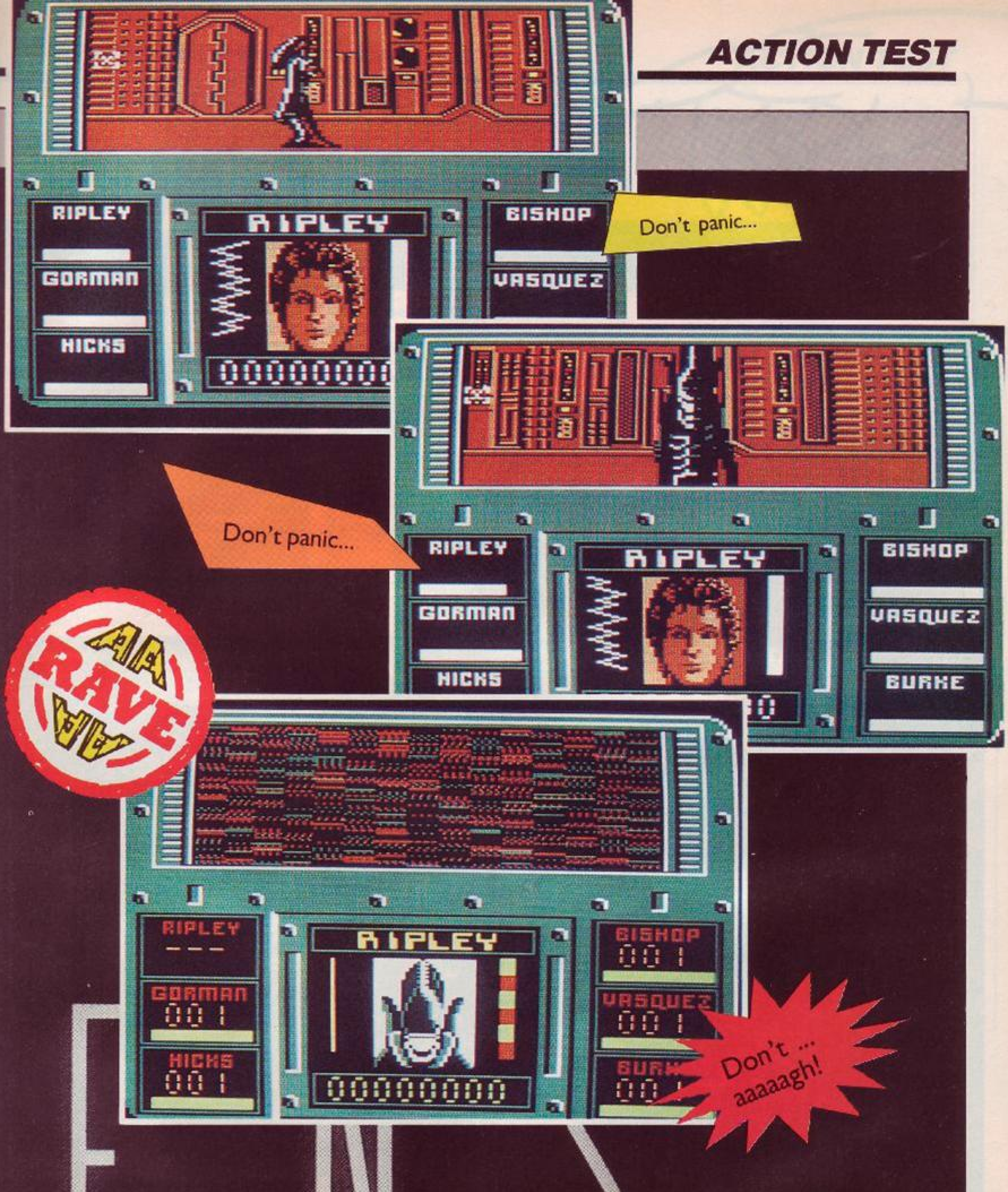
- ▶ **Atmosphere thicker than Los Angeles smog.**
- ▶ **Effective and highly original soundtrack.**
- ▶ **Large and difficult playing area.**
- ▶ **Requires fast action and plenty of strategy.**
- ▶ **Good graphics and aliens.**
- ▶ **You won't want to play it alone.**

BAD NEWS

- ▶ **Jerky sideways scrolling.**

GRAPHICS	87%
SONICS	93%
GRAB FACTOR	94%
STAYING POWER	89%
A A RATING	90%




RIPLEY
GORMAN
HICKS
BISHOP
VASQUEZ
BURKE
00000000
Don't panic...
Don't panic...
AA RAVE
Don't ... aaaaagh!

E N S

MASTERGAME

STARGLIDER

Rainbird, £15 cass, £20 disk, joystick or keys

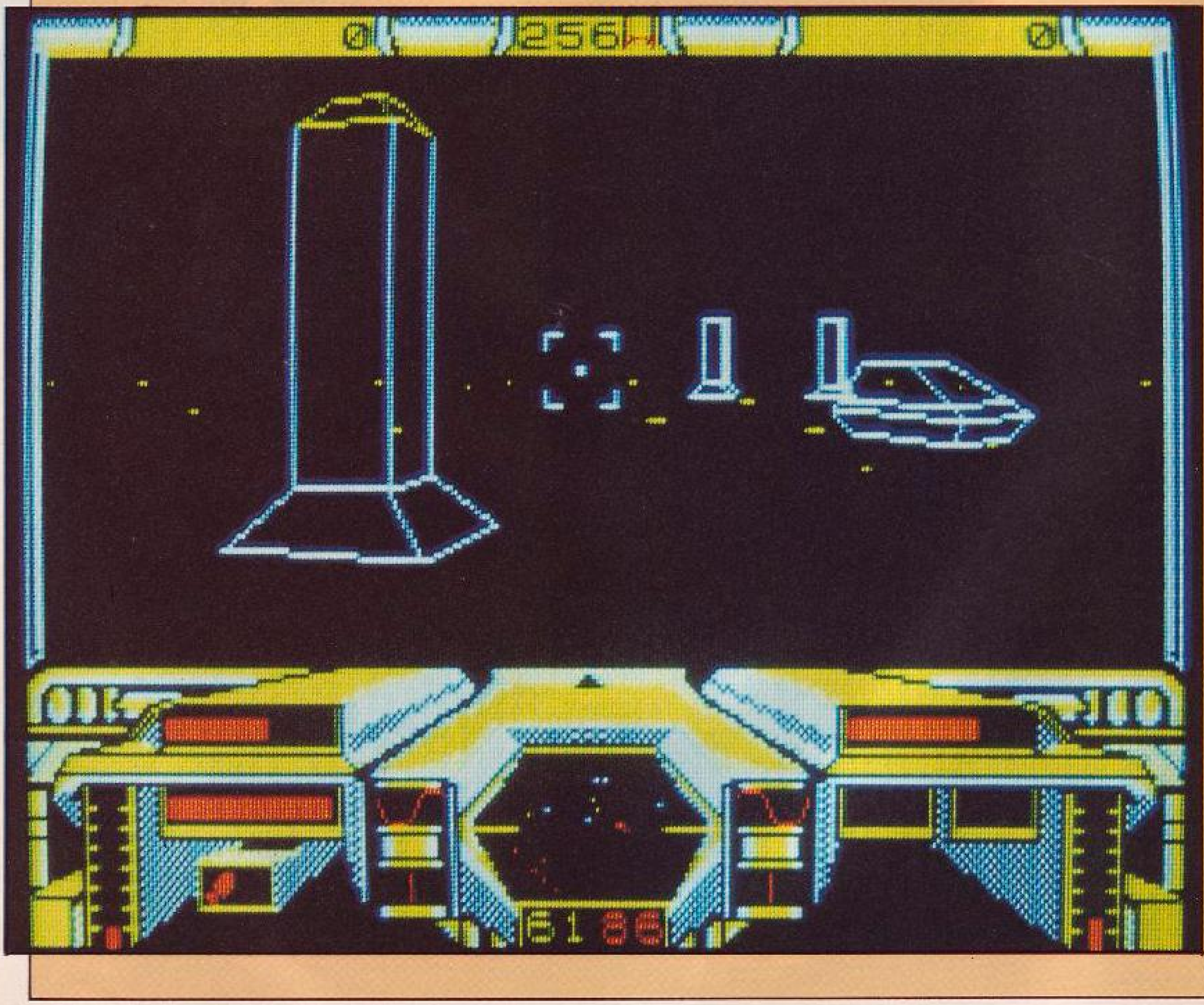
Until now Rainbird has produced only utilities and adventure games, but this heralds its arrival on the games scene. The game started life on the Atari ST, a 16-bit machine (the CPCs are based on the 8-bit Z80 chip), so you'd think it would be very tricky to convert. When you've got Realtime Games doing the convert-ing, though, you can bet the graphics and gameplay will be of the highest order.

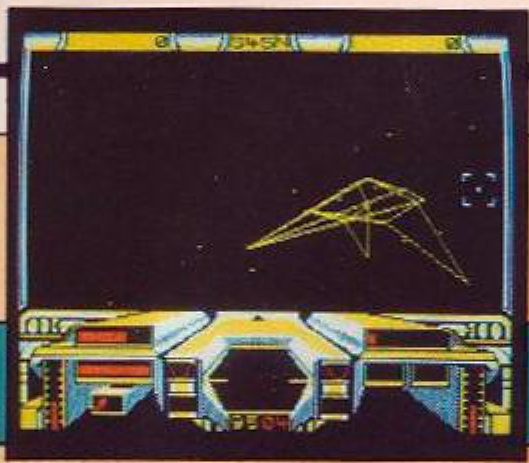
At £15 on cassette and £20 on disk it needs to be good to convince you to shell out for it. If you could judge a game by its packaging you'd have no doubts: it comes impressively boxed with some tasteful art-work. The instructions are in the *Elite* mould, featuring a novella by James Follett (he wrote the film *Who Dares Wins*, but don't hold that against him). The story and 'playguide' booklet don't tell you all the instructions clearly – it's up to you to deduce some actions from what you are told. Don't take the instructions too literally either: there are also some misleading parts.

You won't have much trouble getting into the game. It's just a matter of loading up, choosing from the comprehensive control options and blasting a few aliens. However, you'll soon find yourself needing to pay atten-tion to the strategy side of the action in order to survive for very long. The novella and playguide tell you all you need to know. You just have to sort the hard facts from among the fiction.

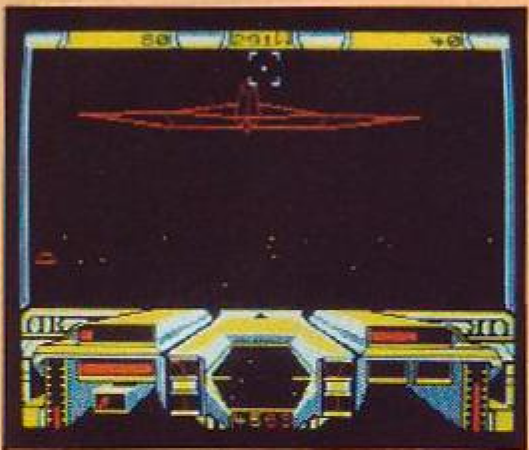


Your task is to do a major demolition job on the enemy forces occupying your planet. You've got a single, antiquated fighter with which to do it. The view is from inside the fighter's cockpit, an instrument panel at the bottom of the screen and the landscape above it. All the objects that appear on the planet are vector graphics, but they come in different colours, there are lots of them and they move beautifully.

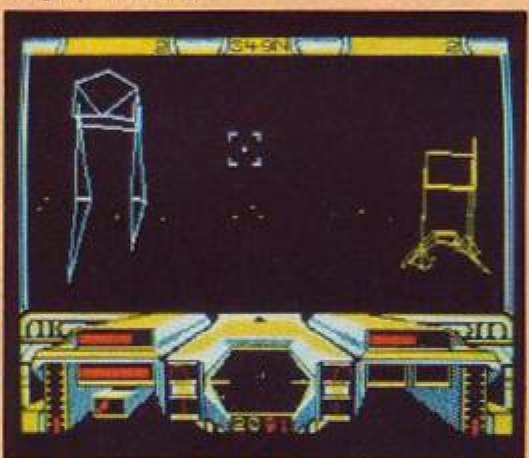




A Starglider drone – they're fast and manoeuvrable



The Starglider is a tough nut to crack



A heavily armoured walker stalks towards you

There are 18 different enemies armed with several different weapons. They all have their own different behaviour characteristics and weaknesses which you'll soon know very well. There are superbly animated walkers and stompers – very like the ones in the *Star Wars* films that stride about shooting missiles. Tanks trundle along, also armed with missiles. In the air you face the threat of several *Elite*-type fighters and, of course, the infamous Stargliders. These are large mechanical birds that have a delightful flapping action.

Your ship is armed with missiles and lasers. Multiple laser hits' are required to destroy most enemies, and missiles will be needed for the larger machines. These are TV-guided to give you a missile's-eye-view in flight. Missiles are in short supply and you have to work out how to get more.

Some ground targets won't attack you. Two in particular are essential for refuelling, repairing, energising the lasers and collecting missiles. The story and playguide will give you hints on what to do, and then it's up to you to work it out while playing. And then you can go on a rampage of non-stop destruction.

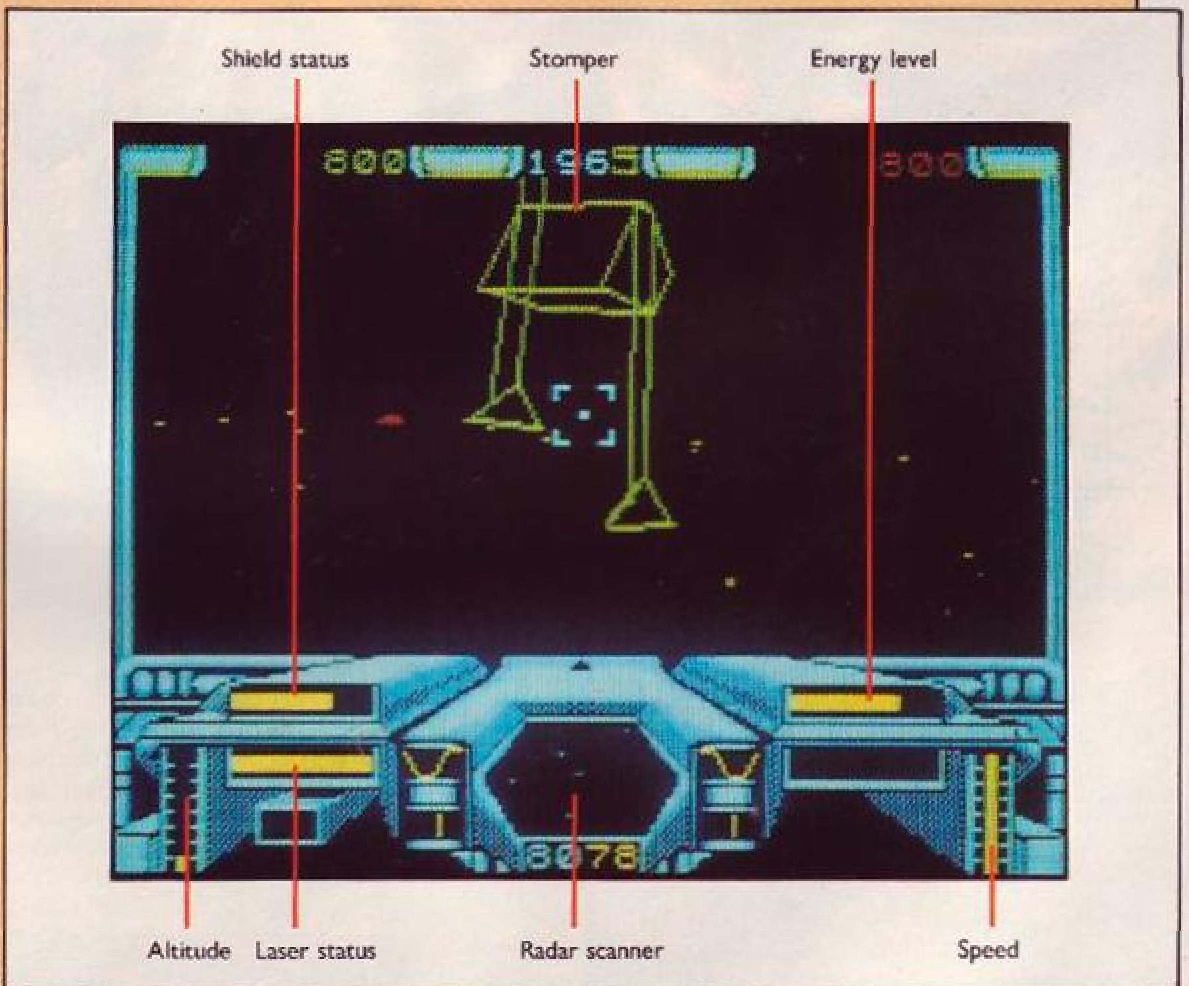
Once your score reaches a certain level (it won't be easy) you proceed to a new level where the enemy appear in greater numbers, are more intelligent and also better equipped. You'll find that even with plenty of practice the going will get very tough.

The graphics really are superb: fast-moving, colourful, excellent animation. The gameplay is out of this world as well: easy to start off with, but as you progress, strategy gets tricky and the enemy get tough.

I know it's horribly expensive, but if you like fast-action games with lots of heavy blasting, you should have this in your collection.

BW

FIRST-DAY TARGET SCORE
5,000



SECOND OPINION

The long-awaited Starglider *has arrived! The vector-graphic animation of those dreaded stompers is classy; watching the Stargliders with their flapping-wing motion is better still. As for getting down to the game, you won't want to switch off. I enjoyed the good old blasting. And underneath its simple game-structure* Starglider *has lots to offer for the strategist.*

RpM

GREEN SCREEN VIEW

Will cost you in both senses of the word.

RpM

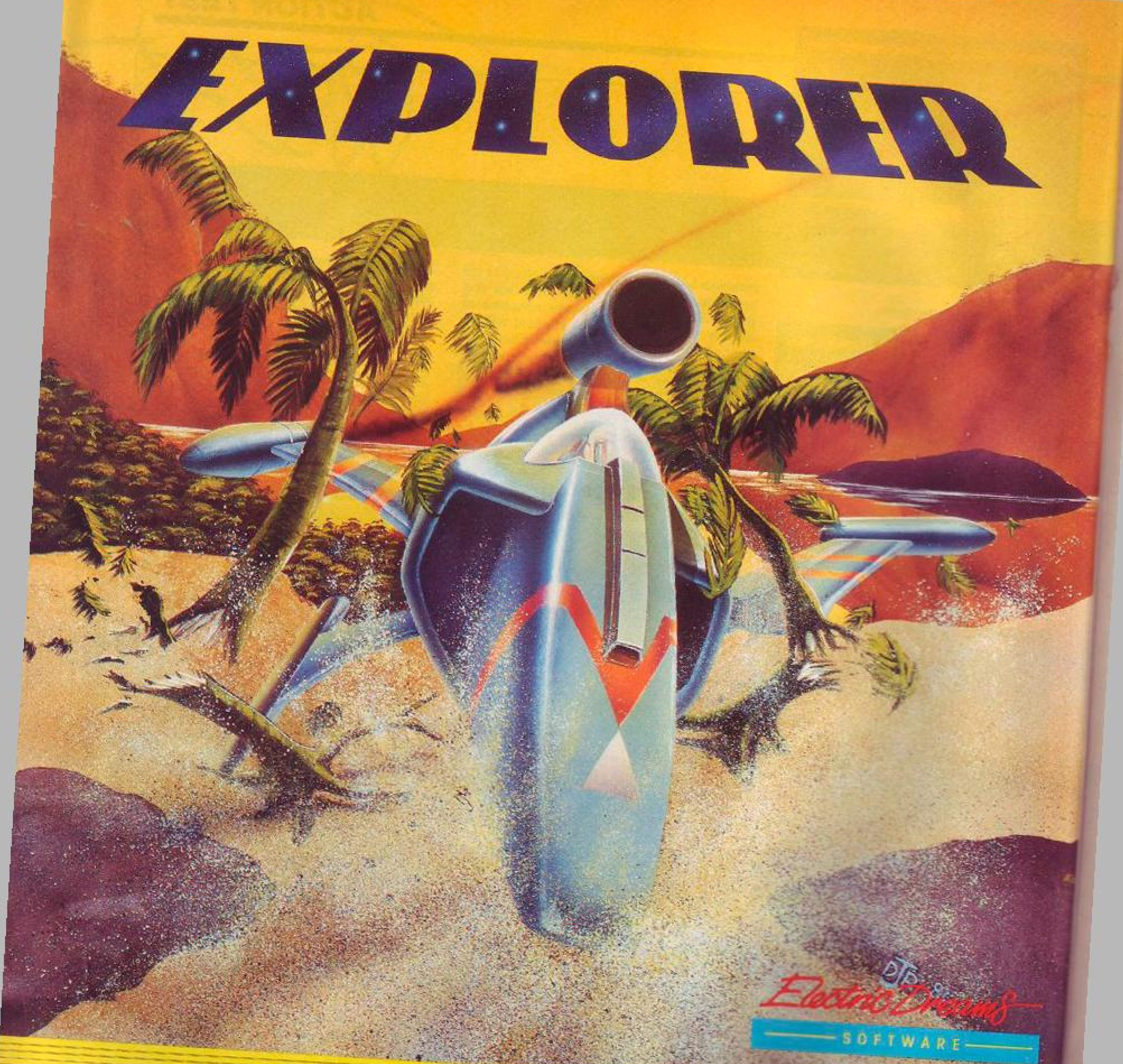
GOOD NEWS

- **Slick packaging with its own novella.**
- **Fast-moving vector graphics.**
- **Superb animation.**
- **Never a shortage of things to shoot. into play.**
- **Strategy element gradually comes more**
- **Increasingly difficult levels.**

BAD NEWS

- **Ouch! That price.**

GRAPHICS	93%
SONICS	37%
GRAB FACTOR	95%
STAYING POWER	94%
A A RATING	91%



Aaargh. Something just woke you from a cryogenic sleep right in the middle of your favourite dream.

Your ship has dropped out of warp and you are forced to make a glide-in landing on a very strange looking jungle planet. Equipped with jet pack for flying, navigation and weapons systems, fight your way through the jungle taking on it's strange and none-too-pleasant inhabitants. Only by finding vital parts stripped in your ship's unscheduled descent can you ever hope to escape.

Explorer is huge. There are literally billions of views and an enormous scrolling map.

If you ever wanted to get lost in a simulation this is the one to do it in.

FEATURES

- 4 way scrolling landscape
- 40 billion graphic locations
- Inertial navigation system
- Rotovision™ animated landscape
- 360 degree views

AVAILABLE ON:

Amstrad CPC cassette	£9.99
Amstrad CPC disk	£14.99
Commodore 64/128 cassette	£9.99
Commodore 64/128 disk	£14.99
ZX Spectrum 48K/128K/+	£7.99





SPECTRUM SCREENS

ELECTRIC DREAMS SOFTWARE, 31 CARLTON CRESCENT, SOUTHAMPTON SO1 2EW TEL: (0703) 229694
Mail Order: Electric Dreams Software, 23 Pond Street, Hampstead, London NW3 2PN

STREET MACHINE

Software Invasion, £8.95 cass, £14.95 disk, joystick or keys

Here's your chance to get into the driver's seat of a powerful road car. (The cassette cover reminds me of a Lotus, but it could be anything.)

The idea is simple: race round the streets of a fairly densely populated area and reach the finish line before your computer opponent. Simple it may sound, but achieving it is another matter.

Starting the race is rather unfair, your opponents being streets (sorry) ahead of you. The only way to catch them up is to travel at full speed. One problem though: when turning a sharp corner, the car will skid quite drastically. This is fine if you're an experienced driver; you can make good use of it. On the other hand, if your driving is a little shaky, it's full speed along the straights and brakes before turning.

You are given a bird's-eye view of the course, more scrolling into sight as you reach its edge. The scrolling is top-class, very smooth and extremely fast (well, when going full-speed anyway). One drawback is that when another car is near, the screen flickers horrendously – admittedly it does not detract at all from the gameplay.

There is a fascinating bug (or is it a feature?) in the game: when another car is on screen, you can go anywhere. Anywhere being fields, hedges and houses – this is the time to put your foot on the accelerator. Unfortunately the program recognises this: when you cross the finish line nothing happens.

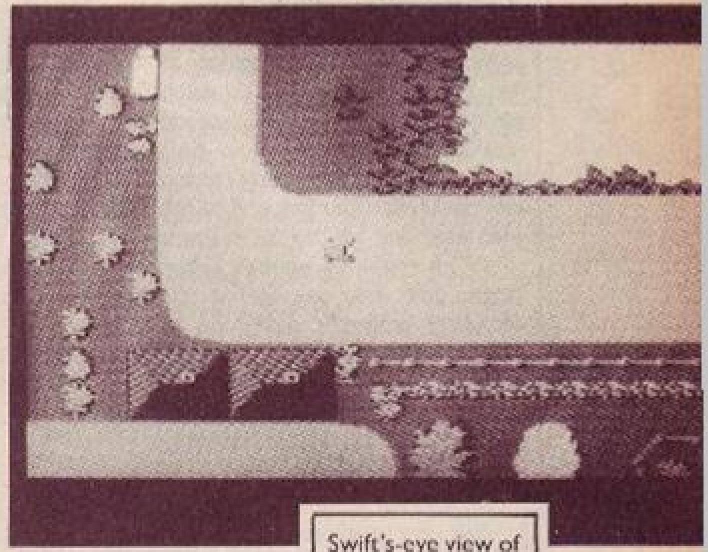
If you crash the car at 'Sunday-driver' speed then up pops a maintenance chart. You have to repair things like sump, fan and suspension – or else it's game over. Crashing at high speed is disaster: no second chance.

The graphics and sound may be rather basic, but *Street Machine* has lasting appeal and is imensely enjoyable to play. **RpM**

SECOND OPINION

It's an old idea for a game but I must say I found myself quite addicted to it. It's quite a test of driving skill as you squeal around corners and try to squeeze past the opposition. Not everyone's cup of tea but there's plenty of fun to be had skidding and crashing around **BW**

FIRST-DAY TARGET SCORE
Complete first course



Swift's-eye view of the car and course

GREEN SCREEN VIEW
Even the skid marks are visible. **RpM**

G O O D N E W S

- ▶ **Fast.**
- ▶ **Amazing bug that allows you to cheat.**
- ▶ **Pulse-pounding gameplay.**
- ▶ **Try it once and you're hooked.**

B A D N E W S

- ▶ **Graphics are a letdown.**
- ▶ **Sound is little better than average.**

GRAPHICS	65%
SONICS	61%
GRAB FACTOR	74%
STAYING POWER	80%
A A RATING	73%

ELEKTRA GLIDE

English Software, £8.95 cass, 14.95 disk, joystick only

Elektra Glide is a 'fantasy racing epic', but I don't see where the fantasy or the epic parts come in. You drive a vehicle to avoid hazards, trying to complete a course in the time given.

The menu screen is very attractive with the word 'Elektra', drawn in lines, which move to become 'Glide.' Initially you must choose the steering control envelope. This governs, or is supposed to govern, the firmness of the steering. You then choose which country you wish to race in – England, Australia or America. The difference between the three backdrops is minimal but there are colour changes.

You start off in a tunnel. The car revs up and you push forward to accelerate. Bouncing balls, rotating spheres and blocks speed towards you. If they hit you, they will stop you in your tracks. Every now and again a plane will fly overhead. It will drop cylinders on the road ahead which you must avoid. Nothing drastic happens if you hit them, you just stop!

SECOND OPINION

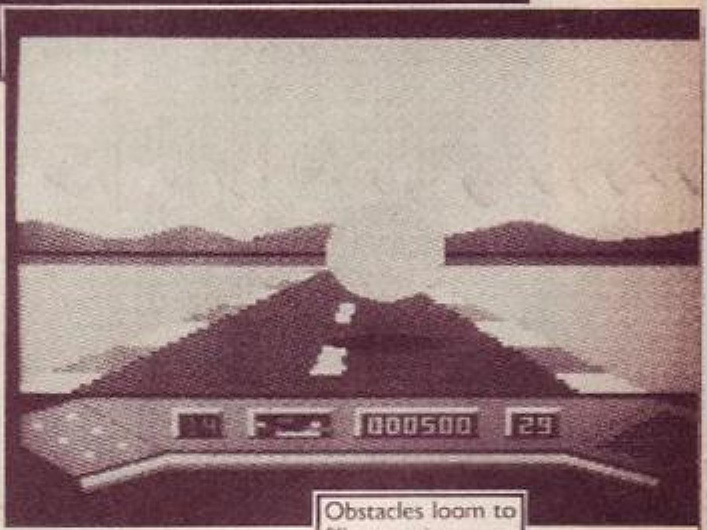
The Amstrad is chronically short of 3D racing games, so in comparison this looks pretty good. The graphics are great, and so is the title tune. It's just let down by some awkward gameplay. The unresponsive steering is annoying, but if you can cope with that there's a reasonable challenge here. **BW**

To complete each lap, you must reach another tunnel. Once in the tunnel, you must steer your way through, avoiding the walls, to start the next lap. Graphics are good, except that you never see another car or anything interesting. The 'perspective scrolling landscapes' are simply the same old peaks scrolling round the horizon. Scrolling is smooth and play is fast.

GREEN SCREEN VIEW
No problem seeing the way ahead. **BW**

The main fault is the lack of steering. You might as well not steer, because you will not come off at bends. You won't crash, just lose time. You go through the signs at the side of the road which pass quickly by. You have great difficulty in steering around any of the obstacles using any of the three 'steering control envelopes.' The game is graphically attractive and tough to master but isn't the epic that the cassette inlay claims. **CB**

FIRST-DAY TARGET SCORE
Complete one course



Obstacles loom to fill your view

G O O D N E W S

- ▶ **Good scrolling graphics.**
- ▶ **Fast action.**
- ▶ **Tough driving with difficult obstacles.**

B A D N E W S

- ▶ **Steering isn't responsive enough.**
- ▶ **Lacks variety.**

GRAPHICS	78%
SONICS	72%
GRAB FACTOR	72%
STAYING POWER	54%
A A RATING	67%

THE SACRED ARMOUR OF ANTIRIAD

Palace, £8.99 cass, £12.99 disk, joystick only

If prizes were awarded for game names, this would be a real winner. Fortunately the game shows the same imagination as the title and has the same attention to detail and graphic excellence as Palace's previous games. Once again they've managed to defy conventional game formats by not only having a well-animated character running and jumping around but also enabling him to fly in the sacred armour.

The game is accompanied by a comic-book that sets the scene nicely but can't compete with the delightful graphics within the program. The task is to find the sacred armour – which is in fact a highly advanced radiation suit. You then have to find and attach another four pieces of equipment that give you the power to attack an alien stronghold.

SECOND OPINION

Remember seeing Sorcery *for the first time? That's the kind of effect* Antiriad *had on me. Graphics, title music, soundeffects, animation, gameplay – in fact everything is just perfect. It is a joy watching the game in progress. Tal is wonderfully animated – his heavy, plodding stride is very realistic. Once inside the armour he can fly, and many new breath-taking screens will be acessible. This is one game you won't put down till it's conquered.* **RpM**

Tal, the character you control, is a muscular, well-animated man. He can not only run and jump about but also throw rocks to defend himself. The 2D flickscreen locations are composed of several areas, like forest, ruins and volcano, and contain many varied features. Getting about on foot can prove difficult: it requires platform-jumping skills and battling against many troublesome aliens.

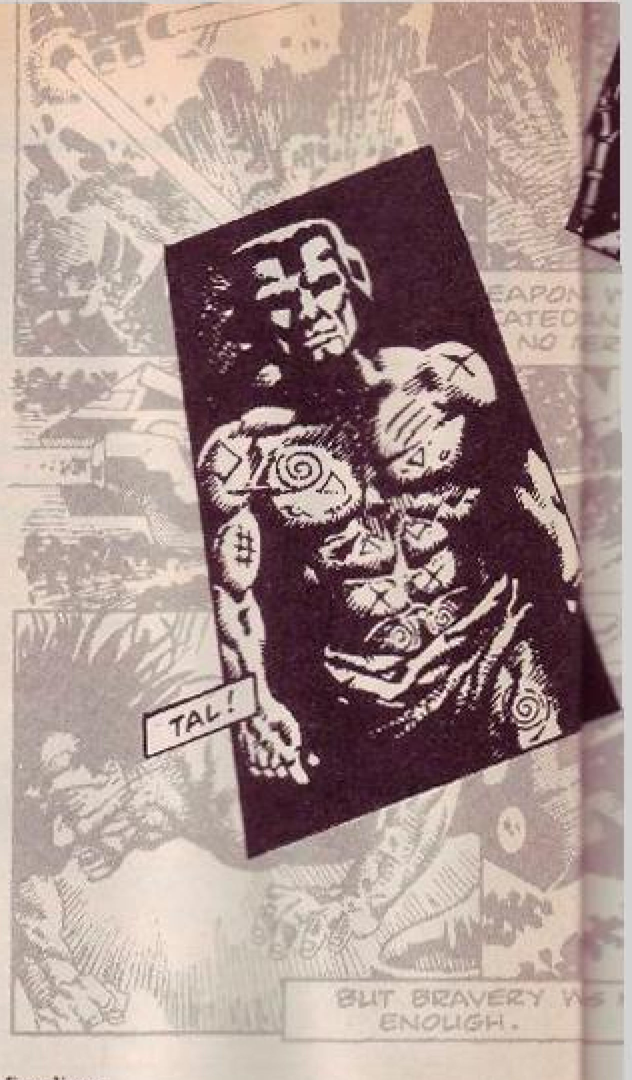
GREEN SCREEN VIEW

Most things are clear and easily seen. **BW**

Aliens come in many varieties. All can prove dangerous. Some patrol droids follow movement patterns; others will home in on your Tal if you give them the time. In the forest he'll find sloths that grab at him, elsewhere are acid drops that splash from the ceiling, gunners who sit in large chairs and blast plasma bolts, and flame dragons who breathe deadly fire. He can destroy some of these by throwing rocks at them, but others are invulnerable. Even the vulnerable ones may require several hits.

Once he's found the armour Tal's problems are just beginning: now he's got to get the four attachments for it. These enable him to fly, shoot, withstand radiation and destroy the alien stronghold. They aren't easy to find. The simplest are the anti-gravity boots that let Tal get the armour into the air.

When he's inside the armour any attacks sap its energy; more is eventually required to keep it flying. When he's outside the suit it saps his own energy until he loses one of the five lives.



The suit's energy can be replenished with power cells that are scattered among the locations, and his stamina can be restored by resting inside the suit. You'll quickly find these resources under a great strain, because the aliens reappear when he returns to a screen where he'd already killed them.

As well as the marvellous graphics there

PALITRON

The Edge, £8.95 cass, £14.95 disk, joystick or keys

It's wonderful to see what software houses are managing to do with the Amstrad's graphic capabilities. Games like *Get Dexter* and *Batman* have shown the way for the isometric 3D genre, and now this latest effort looks set to do as well with a mixture of colourful locations and objects. Not only is it good to look at but it's full of interesting puzzles and tasks to test any gamesplayer.

You control a robot in a futuristic city and have to find and destroy 16 crystals. These are, of course, hidden in the most inaccessible spots. Even if you find one you still have to destroy it by dropping the right object onto it.

But for a while the crystals will be the last thing you're worried about: you'll be more concerned with the many dangers awaiting you and exploring the large city playing area.

SECOND OPINION

Palitron has some of the most colourful and detailed rooms I have encountered in this type of game – even if you're fed up with the 3D perspective, take a peek at this one: you won't be disappointed. The robot you control is one of the cutest you'll come across, and often it's heart rending to seem him go up in a bundle of flame. **RpM**

You trundle about on four balls and can jump. You can also pick up as many as four objects at a time. Some objects have specific uses, like bombs and batteries, but many are just for jumping on or getting out of the way.

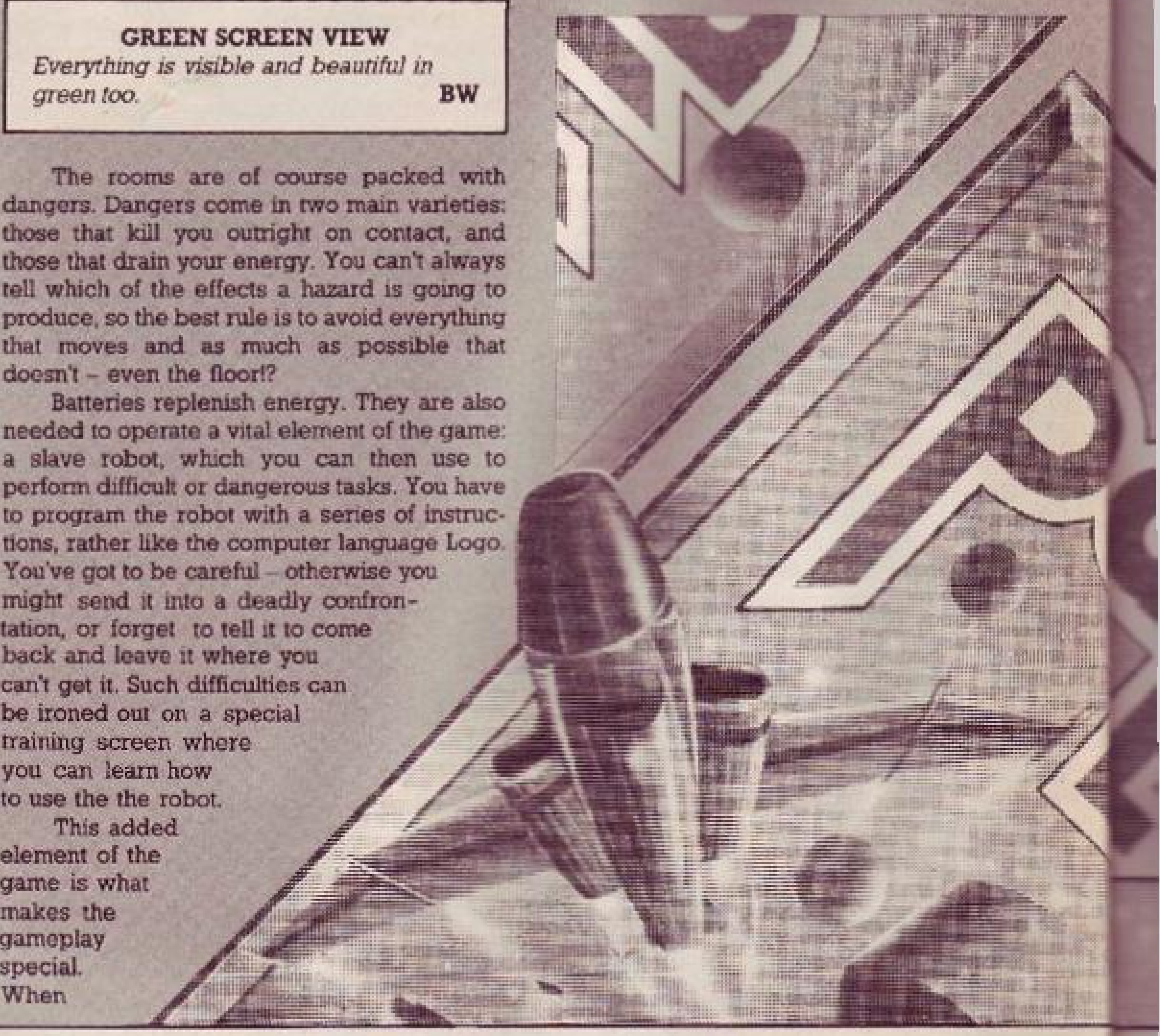
GREEN SCREEN VIEW

Everything is visible and beautiful in green too. **BW**

The rooms are of course packed with dangers. Dangers come in two main varieties: those that kill you outright on contact, and those that drain your energy. You can't always tell which of the effects a hazard is going to produce, so the best rule is to avoid everything that moves and as much as possible that doesn't – even the floor!?

Batteries replenish energy. They are also needed to operate a vital element of the game: a slave robot, which you can then use to perform difficult or dangerous tasks. You have to program the robot with a series of instructions, rather like the computer language Logo. You've got to be careful – otherwise you might send it into a deadly confrontation, or forget to tell it to come back and leave it where you can't get it. Such difficulties can be ironed out on a special training screen where you can learn how to use the the robot.

This added element of the game is what makes the gameplay special. When





is an excellent title tune. The gameplay is a little frustrating at first but once you find the suit and the anti-gravity boots, it opens up into a game with many possibilities and lots of enjoyment. The animation is excellent for Tal; the seated gunner also looks good with only some small movements. Should be a tough nut to crack but you'll enjoy every minute. **BW**



FIRST-DAY TARGET SCORE
Find anti-grav boots.

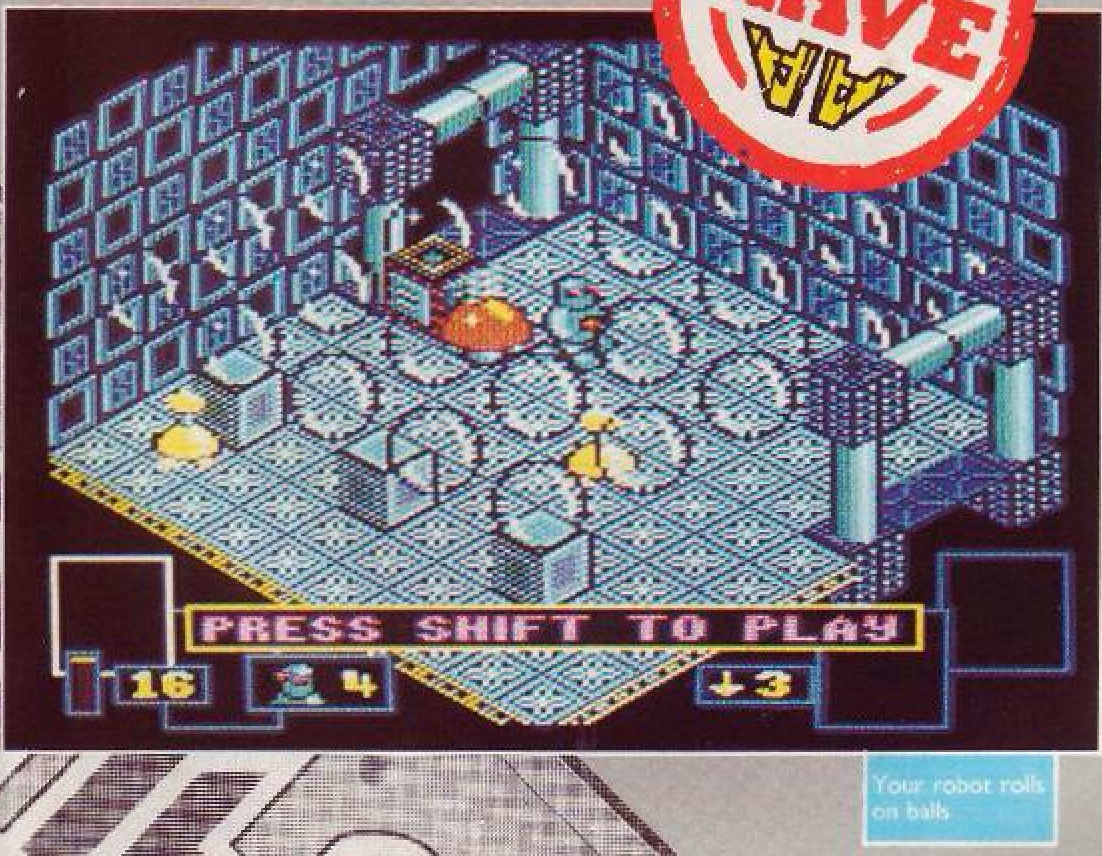
GOOD NEWS

- **Excellent use of colour.**
- **Great animation and graphic designs.**
- **Good title tune.**
- **Tough game to crack.**
- **The suit and its extra features add important variety.**

BAD NEWS

- **Some situations are too difficult to escape unscathed.**

GRAPHICS	91%
SONICS	82%
GRAB FACTOR	88%
STAYING POWER	86%
A A RATING	87%



Your robot rolls on balls

added to the puzzles contained on many screens, it introduces an enjoyable and original aspect to the action. You'll need good timing as well in some situations and the ability to improvise with what you've got.

All this variety combined with wonderful graphics make an excellent game that you won't want to miss seeing, never mind playing. **BW**

FIRST-DAY TARGET SCORE
1 crystal

GOOD NEWS

- **Excellent colour graphics and design.**
- **Large playing area.**
- **Puzzles require thought and good timing.**
- **Programming slave robot adds variety to the gameplay.**
- **Lots of originality in a familiar format.**
- **A tough challenge to complete**

BAD NEWS

- **Control of master robot can be awkward.**

GRAPHICS	92%
SONICS	42%
GRAB FACTOR	88%
STAYING POWER	90%
A A RATING	89%

More adventures from the Arcade Sensation.

GAUNTLET™

THE DEEPER DUNGEONS

ANOTHER 512 ALL NEW!
ALL ACTION! SUPER SCREENS



Did you buy the no. 1 Arcade Smash Hit of 1986 – Gauntlet? If not, you certainly should have. If you did, then you'll be delighted to know that you can play another amazing 512 levels with this super add on.

Requires original Gauntlet to run this version.

CBM64/128, SPECTRUM 48/128K, AMSTRAD, MSX, ATARI
£4.99 cassette
CBM64/128, AMSTRAD, ATARI, £6.99 disk
ATARI ST £12.99 disk

U.S. GOLD · ATARI GAMES

U.S GOLD LTD., UNITS 2/3 HOLFORD WAY, HOLFORD, BIRMINGHAM B6 7AX. TEL: 021 356 3388

TOP GUN

Ocean, £8.95 cass, joystick or keys

Having gone to number one in both the film and music charts *Top Gun* is going for the hat-trick with a computer game. Fortunately the game concentrates on the best part of the film – the flying. You're placed in the cockpit of an F-14 Tomcat and must take on other fighters in a deadly battle to the death.

You can take on either the computer or another player, and start with three planes – which is pretty generous, given the state of the US defence budget. In a two-player game you're trying to shoot your opponent down three times, and in a one-player game you take on groups of three fighters that gradually increase in skill and ability.

SECOND OPINION

On-screen action is about as exciting as washing up after Christmas Day – gameplay is marginally better. The graphics are virtually non-existent, apart from the take-off scene. One thing that really makes Top Gun *is the music: it's brilliant. Is that enough to make a game, though? No!* **RpM**

The game screen is split down the middle; each player views one half. You have a simple display of a gun cursor and an artificial horizon on the HUD (heads-up display) with a few instruments at the base of the screen. The other plane is the only thing that will appear on the screen and is drawn with vector graphics. You're armed with missiles, cannon and flares and can alter speed, height and direction.

GREEN SCREEN VIEW

The sky is perfectly clear. **RpM**

It's not much of a flight simulator, although you can crash into the ground, but as a two-player game it can be quite competitive. The computer also puts up a good battle with the third wave of fighters really starting to get tough. Not a mega-game but a competent product best played with two players.

BW

FIRST-DAY TARGET SCORE

6 planes

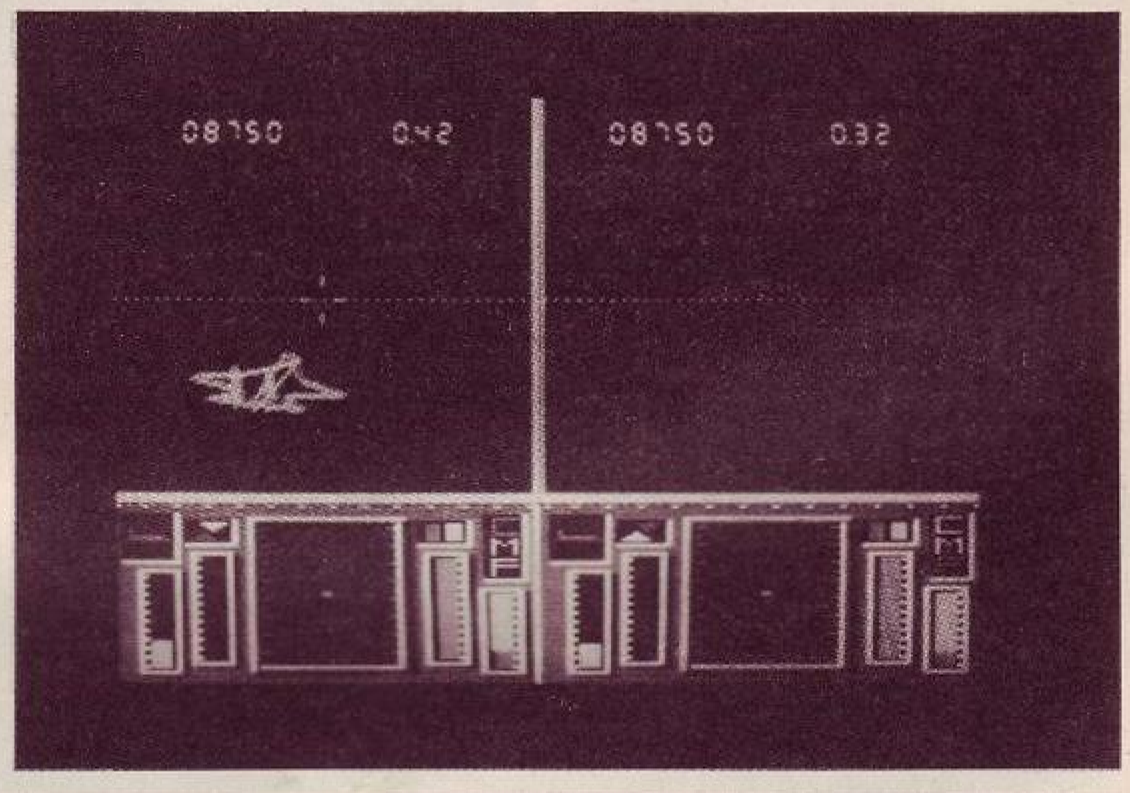
G O O D N E W S

- **Very nice music from the film.**
- **Competitive two-player action.**
- **Computer opponent gets tough.**
- **Fast-moving vector graphics.**

B A D N E W S

- **No variety in the action.**
- **Planes don't move very convincingly.**

GRAPHICS	50%
SONICS	74%
GRAB FACTOR	62%
STAYING POWER	57%
A A RATING	60%



HARDBALL

Amsoft, £9.95 cass, £13.95 disk, joystick or keys

The last baseball simulation on the Amstrad was *World Series Baseball*, which unfortunately allowed you to run up cricket scores and was anything but realistic. This latest from Amsoft – that house has been quiet for a long while – promises a lot more.

SECOND OPINION

As far as sports simulations of this type go, this must be one of the most entertaining I have come across. Even though the graphics and sound are nothing special, it has a certain flare – playability. When first starting Hardball, *it can be devilishly difficult: a couple of hours swinging the bat will soon have you churning out the home runs.* **RpM**

You have control over both the team manager's decisions about who plays and also over all the on-field action. You can play against the computer or another player, and as always with these things a two-player game is the most exciting. Nevertheless the computer does put up excellent performances and won't be easily beaten.

The screen where the pitcher and batter face each other is good. When the ball is thrown, you need good timing and reflexes to

The management side revolves around the various players statistics, which aren't very well explained in the instructions. Fans will know what they are; the novice should just

GREEN SCREEN VIEW

Sensible choice of colours: all can be seen. **RpM**

worry about overall averages for each player. You can shuffle the team around using substitutes throughout a game. This is particularly important for the pitcher: you will probably need several, each one being good at a different type of pitch.

recognise the pitch and try to hit it. A hit will take you to an overview of the field, where the graphics are less impressive. All the usual baseball rules are implemented, including the option of a designated hitter and intentional walks. It's a much better effort than *WSB* was and should prove a popular sports simulation.

BW

FIRST-DAY TARGET SCORE

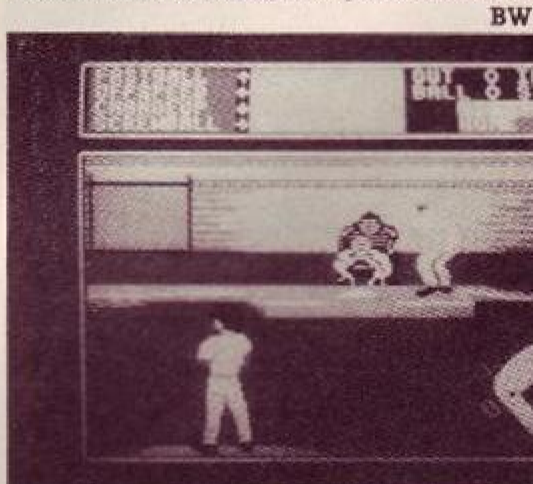
Beat computer

G O O D N E W S

- **Well implemented pitching screen.**
- **A variety of players, styles and pitches.**
- **Fun two-player action.**
- **Reasonable computer opponent.**

B A D N E W S

- **Fielding isn't easy because of player choice.**



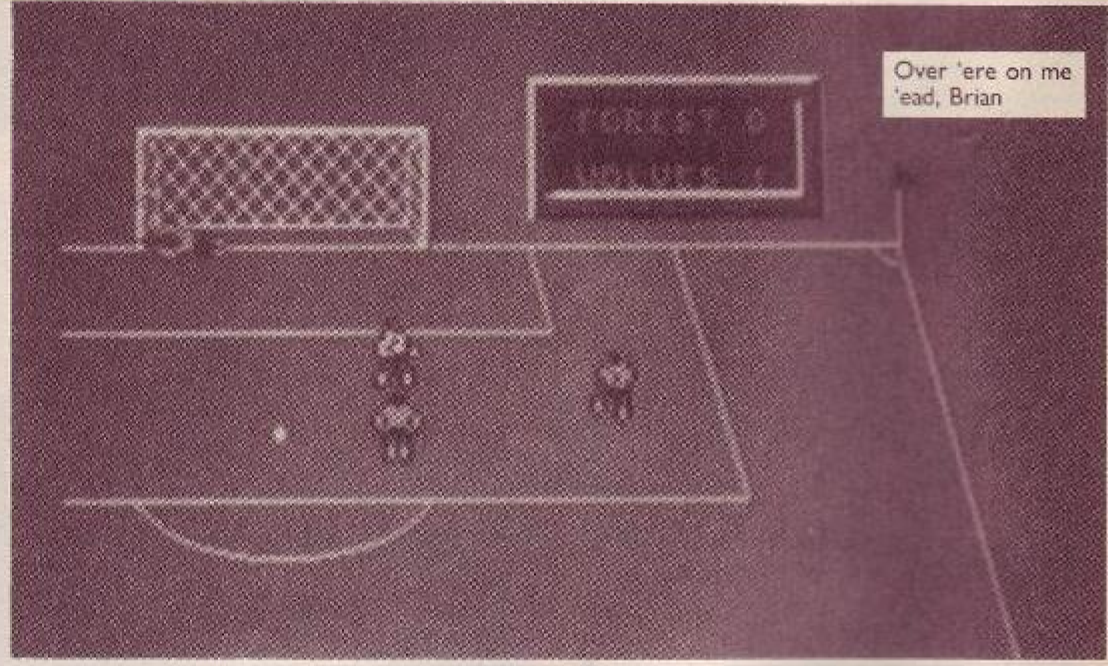
GRAPHICS	68%
SONICS	44%
GRAB FACTOR	76%
STAYING POWER	75%
A A RATING	75%

FOOTBALLER OF THE YEAR

Gremlin, £9.95 cass, £14.95 disk, joystick or keys

Now that the really lousy weather has set in for a few months, all our thoughts turn to football played in the mud, rain, hail, snow and fog. Fortunately the software houses are still trying to come up with games on the subject that can be played in your cosy, warm home. This one involves both strategy and arcade action as you strive to become the footballer of the year.

The game is run from an icon screen where you can examine the team's status, examine the player's status, get transferred, get incident cards, play matches and load, save or quit the game. You start the game with £5,000 and 10 'goal cards', and a long battle ahead.



Over 'ere on me 'ead, Brian

SECOND OPINION

If you're into football simulations then I'm sure you'll enjoy this. I am not a football fanatic and find little, bar the icons and occasional noises, to recommend it. **RpM**

The matches are played automatically, your contribution made only if you play a goal card. This will take you to a screen where you have to beat up to two defenders and the goal-keeper to score goals. The screen is simple but can be entertaining. Matches are also decided by the performance of the rest of the team, though, so even a hat-trick hero can be on the losing side.

The game goes through full league seasons with FA, League and European cups, as well as a Super League and Internationals. Money is important and can often be gained through incident cards or transfers. These are important and mean you shouldn't get too attached to one club. It's not a particularly tough game but enjoyable to play and come back to.

BW

FIRST-DAY TARGET SCORE

Footballer of the Year

GREEN SCREEN VIEW

Pweep... thwack... goal. I suppose you can see that all right. **RpM**

GOOD NEWS

- Well-presented icons and screens.
- Nice mix of strategy and arcade.
- Easy to get into and play.

BAD NEWS

- Doesn't have much depth to it.

GRAPHICS	60%
SONICS	22%
GRAB FACTOR	68%
STAYING POWER	66%
A A RATING	66%

PETER SHILTON'S HANDBALL MARADONA

Grand Slam/Argus Press, £6.95 cass, joystick or keys

You'll be relieved to know that it's got nothing to do with the incident in the World Cup – that's just a clever title to make the game sound more attractive. As it is, the real issue is whether Argus has committed a professional foul itself by releasing it.

You take the goalkeeper's role as you try to steer your team to victory. You don't get to decide what goes on elsewhere on the field, just try to stop the opposition scoring. The screen shows the goal at the top of the screen, either on the left, the right or in the middle. The opposing players advance towards the goal, occasionally passing, and eventually shoot. You then have to dive and save the ball.

SECOND OPINION

Why is nobody capable of bringing out a decent football simulation for poor old Arnold? The footballers look as though they have been kept in a dark room all their lives – they are flickery and anaemic. I do believe that's the best place for them. **RpM**

There are defenders who get in on the action but they will never break up an attack, just delay the eventual shot. You can first practise saving a random selection of shots and then move on to a two-half match. This can be played against the computer or another player but the action is the same: you just try to save shots, you don't get to shoot.

You can also upgrade your skill level against a series of more complicated attacks. The variety of attacks including free kicks, corners and intricate passing is impressive. But the graphics aren't, leaving you with the impression that this could have been done a lot better. Bit of an own goal this one, Brian.

BW



GREEN SCREEN VIEW

Flickery but visible. **RpM**

FIRST-DAY TARGET SCORE

Beat computer

GOOD NEWS

- Wide variety of attacks to face.
- Quick thinking required to save goals.

BAD NEWS

- Horrible graphics.
- No variety, just goalkeeping.
- Bad sound.

GRAPHICS	24%
SONICS	27%
GRAB FACTOR	42%
STAYING POWER	31%
A A RATING	38%

HACKER II

Activision, £9.99 cass, £14.99 disk, joystick or keys

Well, the game still doesn't have much to do with the conventional interpretation of hacking but it is similar in style to the previous game. Once again you're trying to help out the US Government with a problem and you have some sophisticated equipment at your disposal to do it with.

As with the original *Hacker* there's a 'front end' that you have to get through before entering the game proper, but this one is simple enough and can be avoided in future games. What isn't simple is the instruction booklet – more like a technical manual that you might get with some advanced piece of electronic equipment. That's what you're supposed to be using in the game, but things could have been a lot more user-friendly.

The action is all displayed on four view screens. They can be quite awkward to use but are very clever once you get the hang of them. There's a lot of planning required if you're going to succeed, so many games will be required for exploring and familiarizing with the facilities available. A testing challenge that could have been even better if the instructions didn't leave you with so much annoying trial-and-error to go through. **BW**

The game takes place inside a complex where you have to recover the Doomsday Papers. To do this you've got to avoid or deceive the security devices while controlling a mobile remote unit (MRU). You've got three of these, but if they're spotted by the security network they're in big trouble.

SECOND OPINION

This one really took some getting into. Even once I'd worked everything out it didn't impress much. Personally I'd rather spend my time hacking for real. **RpM**

GREEN SCREEN VIEW

No problems seeing. **RpM**



GOOD NEWS

- ▶ Requires planning and strategy.
- ▶ Plenty of depth and challenge.
- ▶ Nice atmosphere created.

BAD NEWS

- ▶ Very unfriendly instructions.
- ▶ Still very little to do with hacking.

GRAPHICS	65%
SONICS	20%
GRAB FACTOR	55%
STAYING POWER	67%
A A RATING	64%

BOBBY BEARING

The Edge, £8.95 cass, £14.95 disk, joystick or keys

You'll immediately be familiar with the graphic style in which the game is produced, because it's very reminiscent of *Spindizzy*. The landscape is composed of cubes, blocks and sloping surfaces based on a grid pattern, that form futuristic landscapes. On this odd surface you control a cute little bearing called Bobby.

SECOND OPINION

Bobby is a bearing, Bobby is a bearing, but why am I not bearing him? The graphics may have astounding detail, the sound may come from a crushed tweeter, but why does the gameplay have to be so similar to Spindizzy. *Admittedly, I found* Bobby B *thoroughly addictive, but having seen* Spindizzy, *there is no comparison.* **RpM**

Your task is to explore over 150 screens in search of your four brother bearings who have been stunned senseless by a bunch of evil black bearings. If you can find one of your brothers, then he has to be pushed back home the way you came. Exploring on your own isn't too difficult, but pushing an uncooperative bearing as well makes things very tough.

The bearing rolls nicely around the screen and can charge quite quickly through some areas. You will also encounter puzzles and dangers that have to be got past. These can pose two threats: either to stun you so that you lose control for a short while, or to squash you outright costing a lot of time. Time is precious because all the brothers have to be rescued within a short limit.

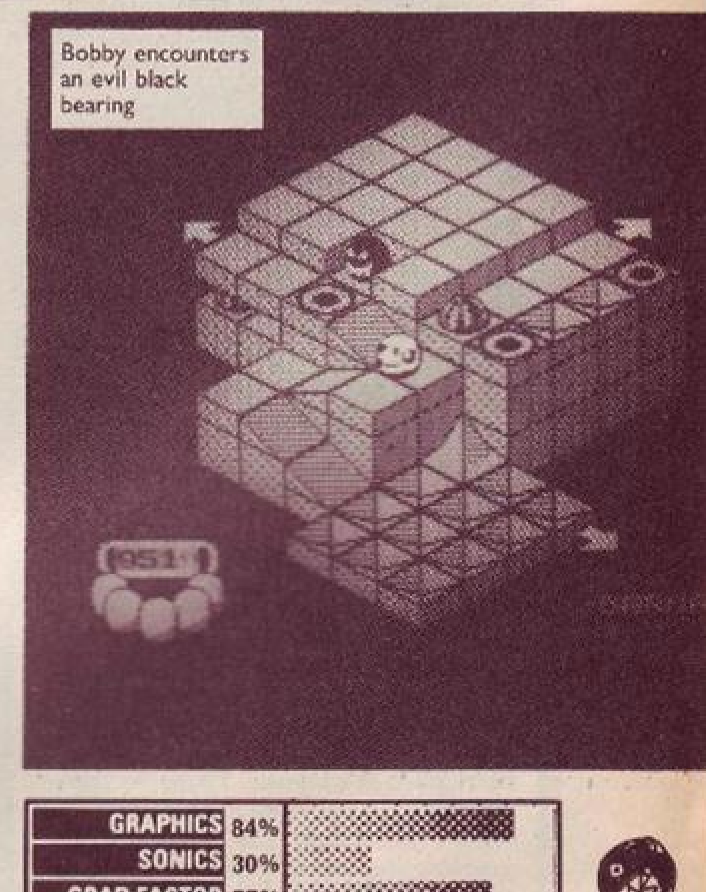
The graphics are excellent. But the game is a little weak on the puzzle side of things, relying most on the difficulty of moving the other bearings. It's not as good as *Spindizzy*, which is larger, more complicated and requires more control, but it's still a lot of fun. **BW**

FIRST-DAY TARGET SCORE

Find brother without cheating

GREEN SCREEN VIEW

Bearable! **RpM**



Bobby encounters an evil black bearing

GOOD NEWS

- ▶ Well-drawn 3D landscape.
- ▶ Very cute and funny characters.
- ▶ Some puzzles to solve.
- ▶ Tough task getting the bearings back.

BAD NEWS

- ▶ Not enough puzzles or complicated locations.

GRAPHICS	84%
SONICS	30%
GRAB FACTOR	77%
STAYING POWER	75%
A A RATING	76%



THE HIVE

Firebird, £9.95 cass, £14.95 disk, joystick or keys

Remember Torus, that gallant team of programmers that brought you *Elite*? Well they've been beavering away for some time on this their new game. It's programmed using vector graphics, like *Elite*, and has a highly original scenario behind it.

You control a craft called the Grasshopper that walks through the hive's complex of tunnels. At the heart of the hive is the queen, and it's your task to destroy her. The complex is composed of eight levels, each successive one harder to get through.

The screen shows the forward view from the Grasshopper and below it a status panel with lots of handy information. What you see is circles stretching off into the distance, making up the tunnel, occasionally splitting into two or three at junctions. Into these tunnels are introduced many different objects and mechanical insects, some of which have to be picked up and used, some avoided and others blasted to pieces.

Just finding your way around will be hard enough at first: it's not an easy game to map and you can easily become disoriented. It's quite easy to find yourself going around in circles and running into the same obstacles several times in a row. Making life difficult the whole time are the other mechanical insects that inhabit most areas of the tunnels.

GREEN SCREEN VIEW

Dull, but everything is clear. **RpM**

The insects appear in swarms – well, waves at least – and which insect it is depends on the level you're on and the area of tunnel you're in. They come in all sorts of weird shapes and sizes, including one that looks like a flying TV set. Many of the insects are attractive but you must blast them without mercy because when they crash into you they drain large chunks of energy. The more nasty the insect, the more energy gets lost.

There are other static obstacles poking out from the tunnel walls, most of them dangerous. You can jump or duck under some, but others will have to be blasted or removed by another means. There are also objects which can help you, including pylons to provide energy, guns and bombs for killing insects, keys to remove some barriers in the tunnels, and shielding for the Grasshopper.

SECOND OPINION

Buzzzzingly good. I enjoyed Hive *because of its novel gameplay. Twisting your way down mile upon mile of hypnotic tunnel may not be everyone's cup of tea, but it has addictive qualities: avoiding flying insects or blasting them (my preference), collecting weapons and trying to find the way around the maze of tunnels. I found the game to be relaxing at certain stages, at others it was mayhem. Recommended.*

RpM



Your status panel gives lots of handy information on whether you're being attacked from behind, when you're approaching a junction, what you're carrying, and a teleport code allowing you to return to particular spots easily. Handling objects, changing speed, jumping and crouching all require you to use the keyboard, which can be inconvenient, particularly when you are using the icon system that allows you to use objects.

The vector graphics are excellent, fast-moving and for some insects quite detailed. The game itself will take some getting to grips with, but there's plenty there for those with a bit of patience for exploring.

It's certainly unlike any other game I've played. Although it won't get your adrenalin pumping it is a challenge that will have you thinking and exploring for quite a while. **BW**

FIRST-DAY TARGET SCORE
1,000

KAT TRAP

Streetwise, £8.95 cass, £14.95 disk, joystick or keys

Does the name Jonathan Eggelton mean anything to you? No? Well, once upon a time there was a competition held in another magazine to design a game. Cutting a long story short, Jonathan's *Kat Trap* was the undisputed winner. The game was programmed by Design Design, which assures excellence, and is out on Domark's new label, Streetwise.

Kat Trap's history may be rather boring; the game is not. In the future when Earth is wrecked by solar explosions and Cat Men walk the once-green planet, your task is to regain control of the world. You control a small robot, MTED (Multi-Terrain Exploration Droid), which looks more like an egg on steel stilts than a computer equipped with self-targeting weapons and a grenade launcher.

Up flashes the screen: a grim sky, cat-like structures in the background, but worse, cat men approach...

From that moment, there is no turning back.

SECOND OPINION

This is one of those games that cause you to throw fits of rage when you lose another life, but that you always come back to. The feeling of injustice at having been killed is immense. You're so incensed that you have to play again in order to get it right. The detailed graphics and varied zones make it look good and stay interesting. It's definitely one to have a look at. **BW**

Everything is viewed from the side. You start with five, much-needed, lives. Bullets are your weapons. This information is displayed at the top of the screen. Energy and score show at the bottom of the screen.

Not long after starting the game, you will encounter your first enemies: the cat-men. A quick blast from your trusty shooter. The game has several nice touches here: when you fire, out pops a gun barrel – pow, and down falls your victim.

GREEN SCREEN VIEW

Great, I can see everything. **RpM**

Things are never quite that simple. The cat-men duck when you fire. If you shoot once and miss, it is fair to assume you will lose a life. Unfortunately, you stop when you fire. This is downright annoying, especially when things approach from both sides. Not one of the nice touches.

As you travel through the many screens, the ever-changing, detailed and interesting background makes it hard to concentrate on the task at hand.

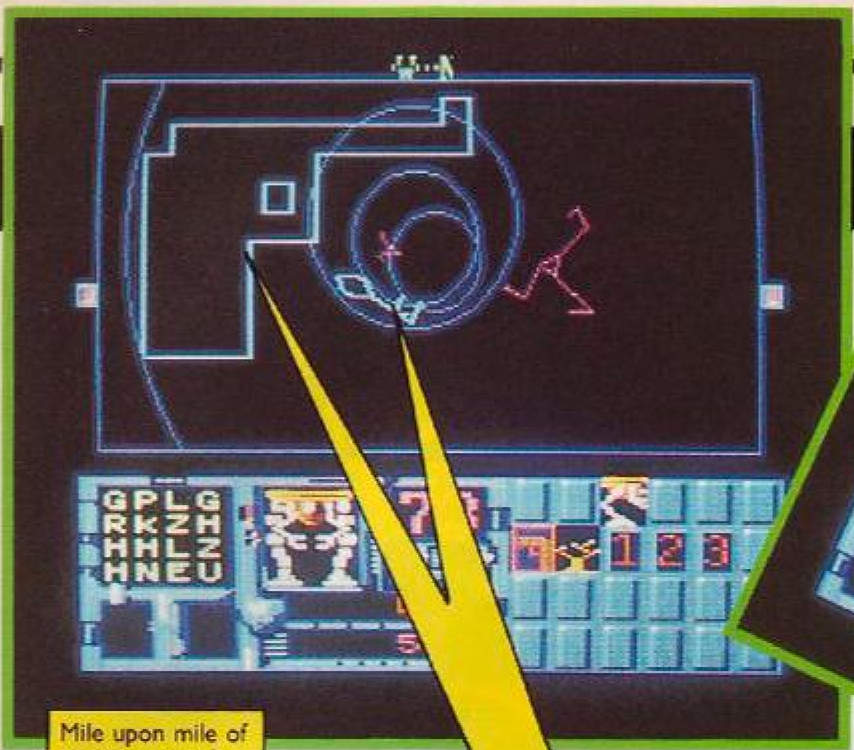
The game is split up into sections, or rather enemy attack waves. The cat-men are the first, closely followed by exceedingly annoying bouncing rocks, holes in the ground (don't stand over these or a ghastly black hand will grab you) and what appear to be flying boxing gloves. The further you progress in the game, the stranger becomes the opposition. Nasties include dogfish, goldfish, swellings in the road, ghosts (which do nothing but distract you), flames, tanks, stickmen (bearing a strong resemblance to a quaint character named Morph) and large robotic cats.

Don't assume this is 'just another shoot-em-up.' It's constant excitement, although there is little to do but blast, jump and duck. On your travels, several objects are picked up automatically, ranging from weapons to extra lives and energy cells to sustain the power-hungry droid.

You must carefully select the right weapon to exterminate different types of enemy. To destroy the flames, for example, shoot it with water. Don't be fooled into thinking that everything is that logical though – who's ever heard of frying goldfish with a laser?

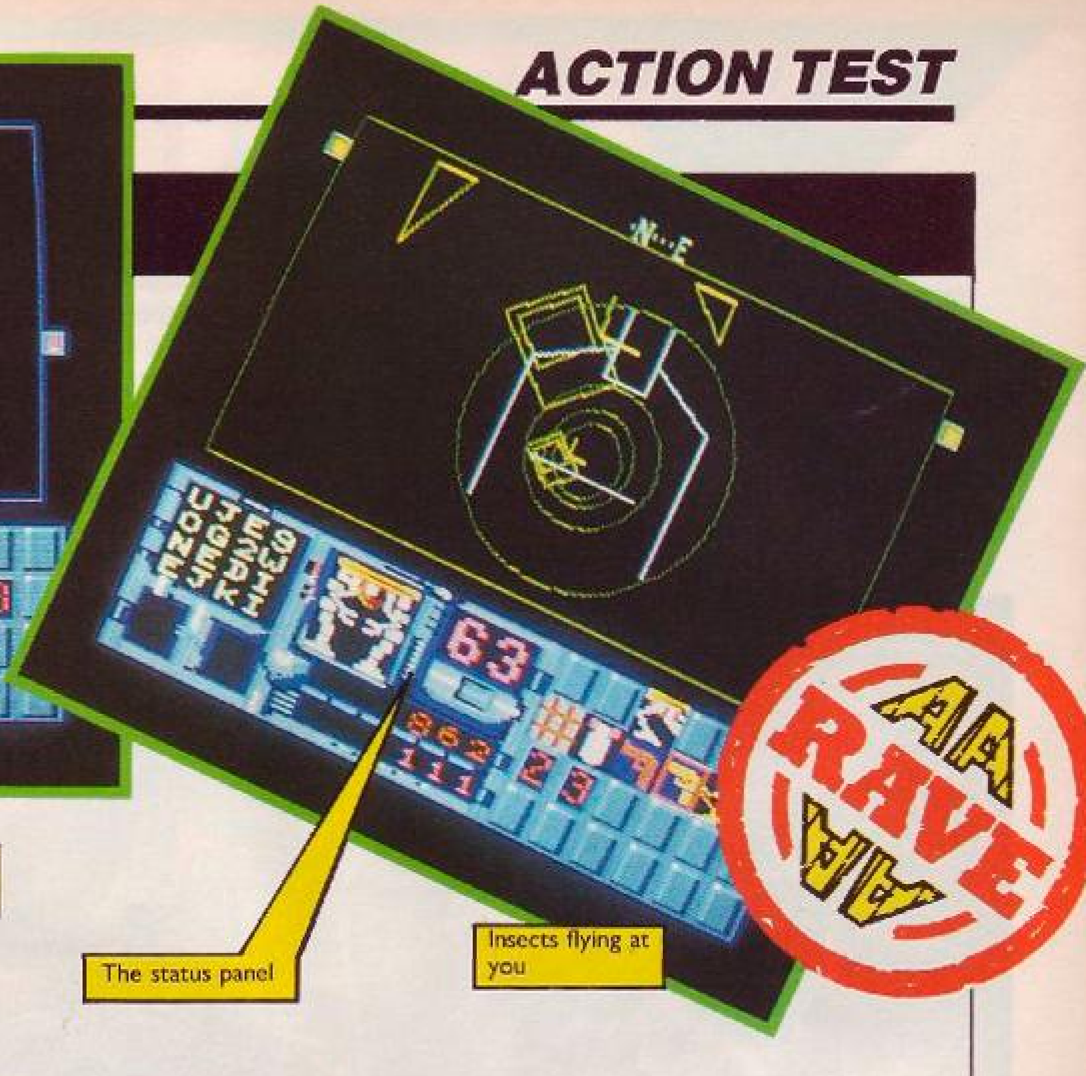
Some humourous touches have been added in just the right places: when hit by a bouncing rock, the droid spins through the air





Mile upon mile of twisting tunnel

A key and a gun to grab



The status panel

Insects flying at you

GOOD NEWS

- ► Smooth, fast vector graphics.
- ► Large, complicated playing area.
- ► Great graphics for the insects.
- ► Many objects to find and use.
- ► Very original game concept.

BAD NEWS

- ► Doesn't give you any urgency when playing.

GRAPHICS	89%
SONICS	39%
GRAB FACTOR	83%
STAYING POWER	88%
A A RATING	86%



The ruined city, purple sky?



The first zone with menacing cat weaponry

until landing safely on his feet. The same happens when bumping into other alien life-forms. It's just that you normally land in a heap, lose a life and have absolutely nothing to laugh about.

Kat Trap is a fantastic game that will have you screaming for more. The graphics are finely detailed, there is a large playing area, wonderful touches and lots of things to blast. There are one or two disapointments though: miserable one-channel beeps, the occasional screen flicker and rather awkward control. Niggles aside, it will keep you hooked. **RpM**

FIRST-DAY TARGET SCORE
1500

GOOD NEWS

- ► Wonderful alien variety.
- ► Very funny in places.
- ► Colourful and detailed.
- ► 'I-wannanother-go' appeal.

BAD NEWS

- ► Abysmal sound.
- ► Control can be awkward.

GRAPHICS	82%
SONICS	24%
GRAB FACTOR	85%
STAYING POWER	82%
A A RATING	83%

180

Mastertronic, £2.99 cass, joystick or keys

180 is an upmarket darts game with a difference. Make sure your volume level is turned up before the game has finished loading, because you really don't want to miss the digitised '180' yell so familiar to TV darts.

180 lets you use joystick or the keys you want. You can play 'round the clock' to practice. I suggest you start with this to get used to controlling the dart. A hand is shown on the screen, which you move diagonally to target the dart. Press Fire to throw.

The rules are the same as real darts: you must finish on a double, and hitting the treble-20 bed three times gives a score of 180 and the '180' yell.



SECOND OPINION

As dart games go, this is one of the better efforts with good graphics, tough opponents and a nice practice screen. I would have preferred a wider variety of games instead of just 501 but there's still plenty of fun to be had.

BW

On your turn, the screen shows the hand holding the dart, the board itself and the automatic blackboard. However, when your opponent throws, you see a side shot of him throwing. (Something is supposed to happen in the background while he is throwing, but I ain't seen nuffink happen there yet, you know what I mean, Harry?)

Playing 501 takes the form of a real contest starting from the quarter-finals. In the quarter- and semi-finals, you play one of eight opponents from Mega Mick, Belly Bill, Delboy Des, Devious Dave, Sureshot Sidney, Limpwrist Larry, and Tactical Tel. Each match is the best of three, so you must beat your opponent twice to go through to the next round.

The skill of the opponent you face depends on the stage of the competition in which you face him. The only difference between the eight different opponents is the way in which they finish. One likes finishing on the bull and will often attempt to go bust, by scoring more than he needs, to allow him a second attempt at the bull.

If you reach the final, you face Jammy Jim.

GREEN SCREEN VIEW

Clear, and has board colour options.

BW

As the cassette inlay says, 'to beat him you must be more than just amazing.'

The inlay card includes a useful table of possible finishes from 170 down to 1.

I enjoyed playing this game and felt that most of the features were done well. However, the only sound in the game is the applause when you score 100 or over, and the '180' yell. But overall, an excellent buy for the price. I got hours of fun and enjoyment from it. **CB**

FIRST-DAY TARGET SCORE

Get to the final.

G O O D N E W S

- **Good graphic throwing hand.**
- **Some tough opponents.**
- **Nice digitized '180' yell.**

B A D N E W S

- **The real thing's still more fun.**
- **Nobody buys you a round.**
- **Plays only 501 and round-the-clock.**

GRAPHICS	68%
SONICS	66%
GRAB FACTOR	69%
STAYING POWER	55%
A A RATING	67%

HIJACK

Electric Dreams, £9.99 cass, £14.99 disk, joystick only

Hijack is an arcade adventure. The object of the game is to defeat the terrorists who have hijacked a vehicle.

You are in charge of the Hijack Division, a government department dedicated to stamping out terrorism. You must either raise enough money to give the hijackers, or raise enough military support to storm them. On the other hand, you could send in the diplomats to try and talk them out.

You start off in your office. Lifts take you up and down to other rooms and departments. Other members of the government staff walk around, and whenever they are in the same room as you, you can ask them to perform specific duties. The president is the only one who can fire you. You may ask him for transport to the hijack scene, or for a deadline extension, or for military, financial, or political support. He's quite tight and rarely gives you anything without quite a bit of pestering.

The other characters which you may control are:

- The FBI agent, who can question another employee, return to his office, or hand in his notice.

SECOND OPINION

I like a bit of political intrigue, and although this isn't quite on the level of Fourth Protocol *it gives a taste of it. It shouldn't take you long to get into the game and the increasingly difficult tasks will keep you there. Not a blockbuster but plenty of potential for fun.* **BW**

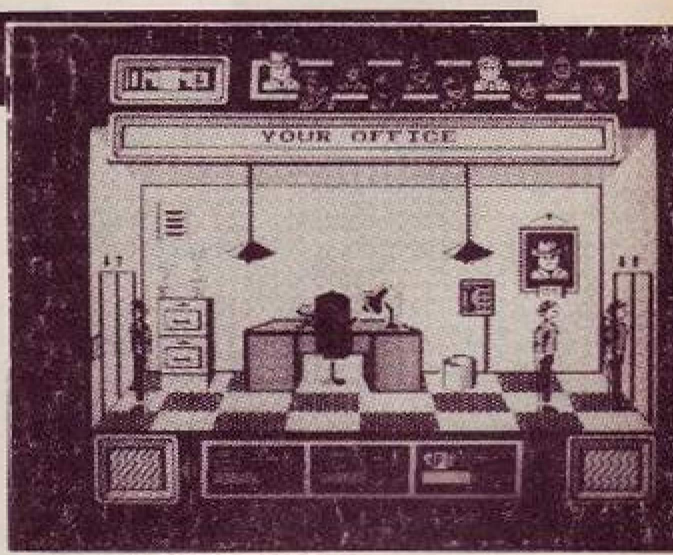
GREEN SCREEN VIEW

Everything's perfectly visible. **BW**

- The CIA agent, who can research the hijackers, return to his office, or hand in his notice.
- The military/political adviser, who can go to the hijack, help assistant, return to his office, or hand in his notice.
- The military/political assistant, who can deploy military forces or diplomats, return to his office, or hand in his notice.
- The publicity officer, who can issue press releases of varying detail, return to her office, or hand in her notice.
- The financial officer responsible for raising the cash, who can raise funds quickly or slowly, go to the hijack, return to her office, or hand in her notice.
- The secretary can find an employee and send him or her to your office to wait. The employee will do so if he is not busy and depending on his loyalty.

Once given the access code for the president's door, you may go to the top of the building and get into the helicopter, which will fly you to the scene of the hijack.

I like this game very much. The graphics are not bad, and the game is fairly addictive. There is little or no sound, but this does not detract from the game. The lifts taking you from floor to floor are well depicted and add to the game's attraction. Unfortunately, the characters move very slowly and you really need a whole day to get into the game. **CB**



FIRST-DAY TARGET SCORE

Get through the door into the president's office.

G O O D N E W S

- **Exceedingly addictive.**
- **Many, many glorious rooms.**
- **Each character has a life of its own.**

B A D N E W S

- **Walking is slow and cumbersome.**
- **Takes a long time to play.**

GRAPHICS	68%
SONICS	17%
GRAB FACTOR	71%
STAYING POWER	62%
A A RATING	65%

XCEL

Mastertronic, £1.99 cass, joystick or keys

This is one of those games that you either love or hate – there's no middle ground for compromise. It's basically a two-stage shoot-em-up, but with lots of frills that add to the enjoyment – or frustration, depending how you look at it.

You control a spaceship trying to track down 30 planets among 300. On each planet you have to get through several defence zones before finding out whether there is a computer at the end of it. If there is no computer then you've wasted all your efforts and will have to go off and try somewhere else.

SECOND OPINION

Some very nice programming touches have been incorporated in Xcel. It is graphically stunning; even the soundeffects are bearable. The gameplay lacks variety – basically it's down to the planet surface, blast a few aliens and return to your ship. It doesn't stop there, though, for you keep repeating this task. At under £2 though, there can be no doubt in my mind: this game's a winner.

The screen initially shows you orbiting a planet, with a detailed control panel. From here you can access seven other facilities that may give helpful information. There's one computer that tells you about all the other controls and a second that gives information on all the planets. 'Status' gives you information on your shields and shooting accuracy, the map allows you to choose a planet to which

GREEN SCREEN VIEW

Sensible choice of colours, all is visible.

you can hyperspace, and the communication option gives you any messages.

Many of these messages are translated from a weird alien scrawl. If you can decipher it (if it's possible) you're a better code-cracker than I.

When orbiting a planet you can send down a remote probe. You have only a limited number of these – when they're all gone, the game is over. Once down on the planet surface the probe has to go through a number of sections composed of two basic games.

The first stage is always a downward-scrolling screen – you can move your ship anywhere. It has to manoeuvre through narrow corridors of indestructible trees and blast away other objects from its path. The stages vary in design: some are almost like mazes and others require plenty of blasting. In places you need pixel-perfect accuracy with the ship – this is where you will either love or hate the game.

The second type is a simple old shoot-em-up. Aliens whiz on from the top of the screen and circle around. If you can blast enough of them, it's on to another of the scrolling stages. Aliens shoot back and can be very dangerous. If you die, the next probe will have to start again from the first stage. If you reach the third stage and then die, you restart on stage three.



If you get through enough stages you discover whether a computer base was on the planet. Then it's on to the next planet in search of another one. The stages really are tough but with practice they can be mastered.

The required accuracy of control will drive you up the wall, but you'll always come back for more. There are lots of lovely graphic effects – from the loading screen right down

SPACE HARRIER

Elite, £8.95 cass, £14.95 disk, joystick or keys

If you've visited the arcades over the past year, you may well have noticed this game. The arcade version allowed you to sit in a booth that was moved around in relation to the action to enhance the feeling of movement. Of course that isn't possible for the home versions, but this still looks like another big smash for Elite.

It's another game where you don't have to worry much about the scenario – just blast everything foolish enough to stray onto the screen. You take the role of a man toting a hip-slung gun.

You can move all over the screen, running along the ground or flying through the air. When the man runs carrying the gun, the rear

SECOND OPINION

If you like it fast and furious, then Space Harrier *has got it. You have to be wide awake to play this game. Trying to amass multi-million scores at four in the morning is not the way to do it. The speed and mindlessness of* Harrier *ensures that I for one shall be playing it for weeks.* **RpM**

view gives the impression he's playing a guitar. This is dispelled when he flies or turns sideways, or by loosing off the gun's lethal blast.

The ground scrolls towards you; scenery in the background moves when you swing away from the centre of the screen. Trees – drawn with vector graphics – loom fast toward

GREEN SCREEN VIEW

Everything is much clearer in green. Be thankful – you need all the help you can get. **RpM**

you. Avoid these or they will cost you a life. You can't shoot the trees on any of the many levels, but they do vary in height and shape.

Once you experience the speed of the game you may think this enough to cope with. But there's plenty more to come: all manner of weird aliens are going to be thrown at you.

Aliens too are all drawn using vector graphics, and come on in waves from different parts of the screen. Sometimes they appear from behind you, sometimes from the distance ahead and sometimes zip in from the sides.

Once on screen they'll wheel about in a preset pattern, blasting off oval-shaped charges at you before disappearing off screen. If a shot hits you, you lose another life, but if you can hit the aliens with your bullets they blow up.

At first you'll wonder what on earth is going on. But as you get used to the speed of the action, the vector graphics against solid-graphic background, and the three things you have to avoid (trees, aliens and shots), things will become easier. The most important thing is concentration: at the speed things move, you have to be at your peak of seeing and thinking.

This isn't one of those horribly tough games, mind you, because you can get right into it and have plenty of blasting fun whatever your standard of play. If you survive enough waves you get through to a different scrolling background with new trees (which aren't always trees). On some levels you must first defeat a multi-segmented dragon, which stays on screen firing salvoes at you until you hit it enough times or lose all your lives.

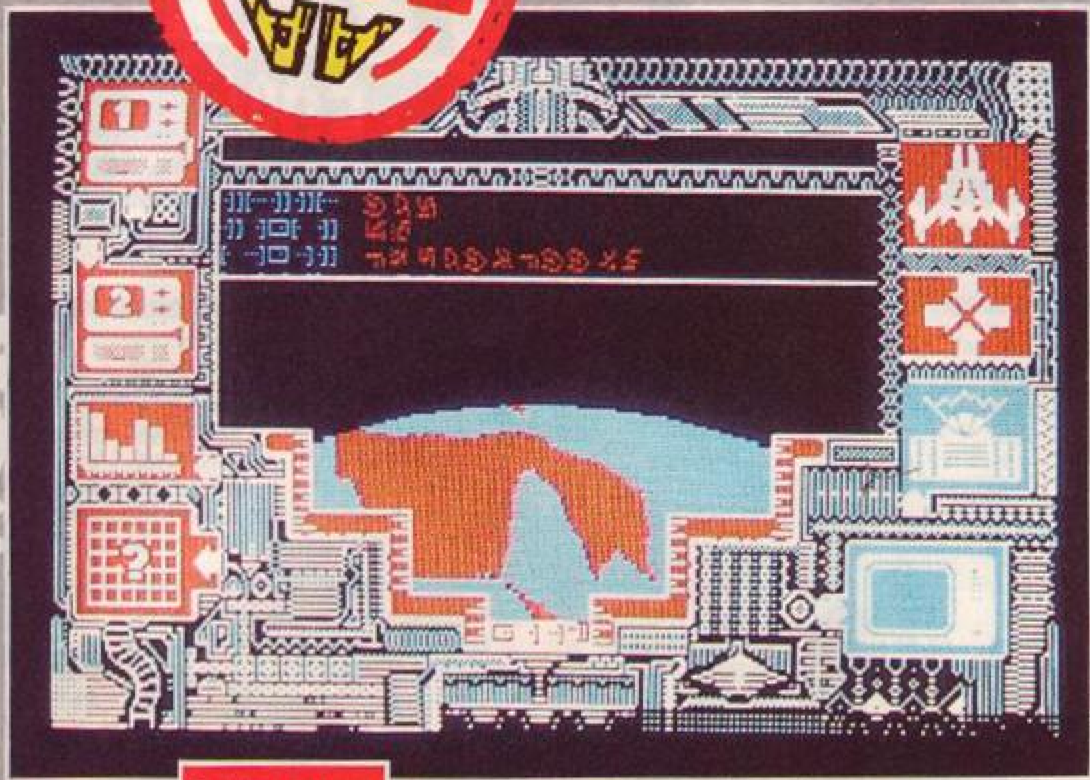
The graphics are superb and incredibly fast. At first you may find the vector-graphic aliens hard to pick out, but keep playing and you'll appreciate them more and more. The music that accompanies the game is just right and the gameplay is sheer, unadulterated blasting bliss. You'll come away from the game mentally and probably physically exhausted but very satisfied. **BW**

GOOD NEWS

- **Amazingly fast action.**
- **Good scrolling backgrounds.**
- **Great vector graphics for trees and aliens.**
- **Many levels of increasing challenge.**
- **Good music for accompanying game.**

BAD NEWS

- **Both you and your joystick may be knackered.**



Orbiting a planet

to the explosions. Should keep anyone happy for only £2. BW

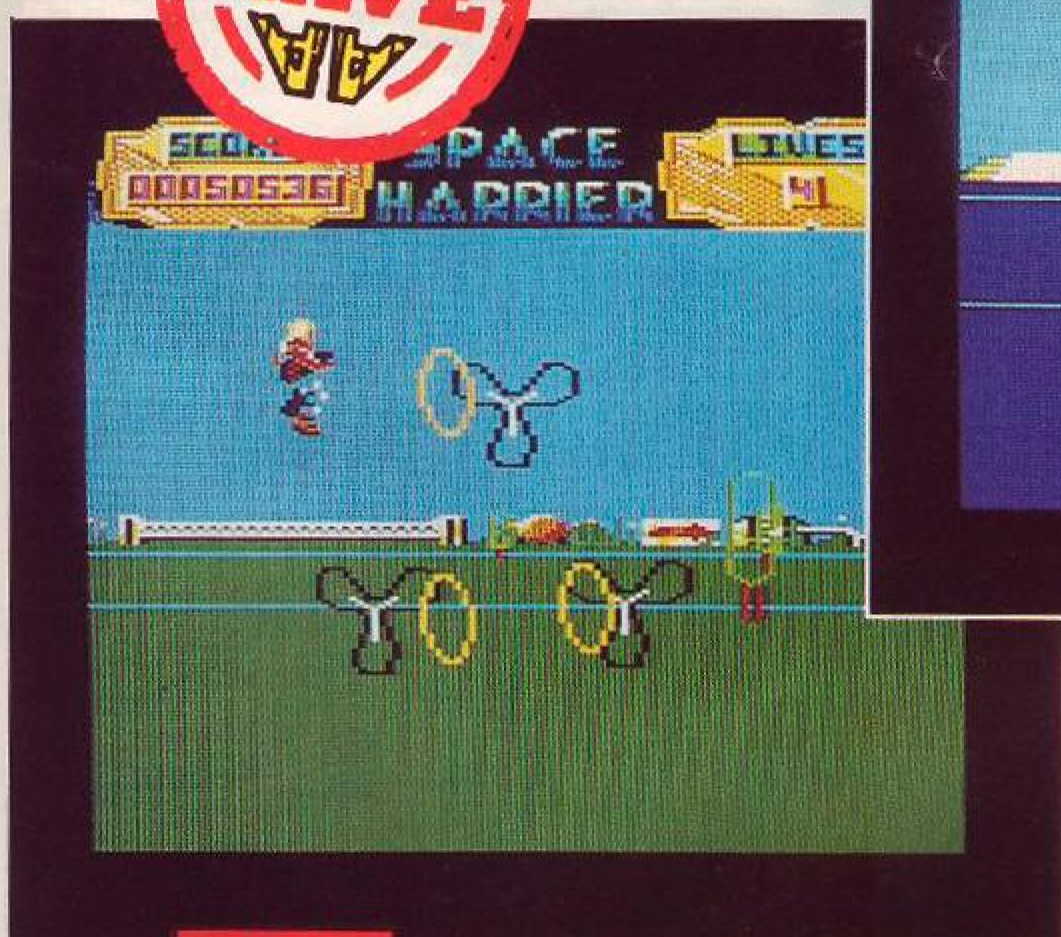
FIRST-DAY TARGET SCORE
Get through all of one planet's stages.

GOOD NEWS
- Good detailed graphics and effects.
- Delightfully presented.
- Addictive shoot-em-up action.
- Variety of stages to master.

BAD NEWS
- Might be just too frustrating.

GRAPHICS	75%
SONICS	35%
GRAB FACTOR	81%
STAYING POWER	74%
A A RATING	80%





Space harrier soars through the air

FIRST-DAY TARGET SCORE
500,000 (Don't you just love it!)

GRAPHICS	93%
SONICS	80%
GRAB FACTOR	92%
STAYING POWER	89%
A A RATING	90%

AMSTRAD GAMES • FOR CPC 464, 664 & 6128

CARRIAGE FREE

AMAZING OFFERS

UP TO **50%** DISCOUNTS!

AMSTRAD CPC—Current Releases

▼£2.00 OFF▼

5 STAR GAMES	BEAU JOLLY	£9.95	**£7.95**
COMPUTER HITS III	BEAU JOLLY	£9.95	**£7.95**
DYNAMITE DAN 2	MIRRORSOFT	£8.95	£6.95
DRACULA	C.R.L	£9.95	**£7.95**
STARGLIDER	RAINBIRD	£14.95	£12.95
TRIVIAL PURSUIT (DISC)	DOMARK	£19.95	**£17.95**
TRIVIAL PURSUIT	DOMARK	£14.95	**£12.95**
SILICON DREAM	RAINBIRD	£14.95	£12.95
THE INHERITANCE	INFOGRAMES	£9.95	**£7.95**
ROGUE TROOPER	PIRANHA	£9.95	£7.95
JACK THE NIPPER	GREMLIN	£9.95	**£7.95**
YIE AR KUNG FU 11	OCEAN	£8.95	£6.95
TOP GUN	OCEAN	£8.95	£6.95
COP OUT	MICRO-GEN	£8.95	**£6.95**
KONAMI GOLF	OCEAN	£8.95	£6.95
KONAMI COIN-OP HITS	OCEAN	£8.95	£6.95
MIAMI VICE	OCEAN	£8.95	**£6.95**
WINTER WONDERLAND	INCENTIVE	£7.95	£5.95
LEGEND OF KAGE	IMAGINE	£7.95	£5.95
THEY SOLD A MILLION II	OCEAN	£9.95	**£7.95**
COLOUR & MAGIC	PIRANHA	£9.95	**£7.95**
FOOTBALLER OF YEAR	GREMLIN	£9.95	£7.95
HITS PACK	ELITE	£9.95	£7.95
NOSTFERATU THE VAMPIRE	PIRANHA	£9.95	**£7.95**
BOBBY BEARING	SOFTEK	£8.95	**£6.95**
NOW GAMES 3	VIRGIN	£9.95	**£7.95**
ZENO	ARGUS	£8.95	**£6.95**
HEARTLAND	BEYOND	£9.95	£7.95
MODEL UNIVERSE	ARNOR	£15.95	£13.95

AMSTRAD CPC DISCS

▼£6.00 OFF▼

MELTDOWN	ALLIGATA	£14.95	**£8.95**
STARQUAKE	BUBBLE BUS	£12.95	**£6.95**
HEAVY ON THE MAGICK	GARGOYLE	£13.95	**£7.95**
WATERLOO	LOTHLORIEN	£14.95	**£8.95**
BIGGLES	MIRRORSOFT	£14.95	**£8.95**
KUNG FU MASTER	U.S. GOLD	£14.95	**£8.95**

▼£5.00 OFF▼

MACROCOSMICA	AMSOFT	£13.95	**£8.95**
GOLDEN PATH	AMSOFT	£13.95	**£8.95**
GLASS	ARGUS	£12.95	**£7.95**
GLADIATOR	DOMARK	£14.95	**£9.95**
"V"	OCEAN	£14.95	£9.95
STAINLESS STEEL	MICRO-GEN	£13.95	**£8.95**
LORD OF THE RINGS	MELBOURNE HOUSE	£15.95	**£10.95**
SAI COMBAT	MIRRORSOFT	£13.95	**£8.95**
NEXUS	NEXUS	£14.95	**£9.95**
THEY SOLD A MILLION II	OCEAN	£14.95	**£9.95**
STAIRWAY TO HELL	SOFTWARE INVASION	£11.95	**£6.95**
TRIPLE DISC	ALLIGATA	£12.95	**£7.95**

▼£4.00 OFF▼

ALEX HIGGINS POOL	AMSOFT	£12.95	**£8.95**
BEACH HEAD	U.S. GOLD	£14.95	**£10.95**
DOORS OF DOOM	AMSOFT	£13.95	**£9.95**
FAIRLIGHT	THE EDGE	£14.95	**£10.95**
KUNG FU MASTER	US GOLD	£12.95	£8.95
GREEN BERET	OCEAN	£14.95	£10.95
RED ARROWS	DATABASE	£12.95	**£8.95**
EQUINOX	MICRO-GEN	£13.95	**£9.95**
BATMAN	OCEAN	£14.95	**£10.95**
GET DEXTER	PSS	£14.95	**£10.95**

AMSTRAD CPC CASSETTES

▼£4.00 OFF▼

MAX HEADROOM	ARGUS	£9.95	**£5.95**
GLASS	ARGUS	£8.95	**£4.95**
CORE	ARGUS	£9.95	**£5.95**
STAR QUAKE	BUBBLE BUS	£8.95	**£4.95**
MOVIE	IMAGINE	£8.95	**£4.95**
PRICE OF MAGICK	LEVEL 9	£9.95	**£5.95**
WATERLOO	LOTHLORIEN	£9.95	**£5.95**
COUNTDOWN	MACSEN	£8.95	**£4.95**
RED HAWK	MELBOURNE	£8.95	**£4.95**
ROCK N' WRESTLE	MELBOURNE	£9.95	**£5.95**
TERRORMOLINOS	MELBOURNE	£7.95	**£3.95**
GYROSCOPE	MELBOURNE	£8.95	**£4.95**
NOMAD	OCEAN	£8.95	**£4.95**
FRANKIE GOES TO HOLLYWOOD	OCEAN	£9.95	**£5.95**
HUNCHBACK III	OCEAN	£8.95	**£4.95**
STAIRWAY TO HELL	SOFTWARE INVASION	£7.95	**£3.95**

▼£3.50 OFF▼

SEAS OF BLOOD	ADVENTURE INTERNATIONAL	£9.95	**£6.45**
MELTDOWN	ALLIGATA	£8.95	**£5.45**
ELITE	FIREBIRD	£14.95	**£11.45**
HEAVY ON THE MAGICK	GARGOYLE	£9.95	**£6.45**
PING PONG	IMAGINE	£8.95	**£5.45**
MOONCRESTA	INCENTIVE	£7.95	**£4.45**
TALES OF THE ARABIAN NIGHTS	INTERCEPTOR	£6.95	**£3.45**
BULLS EYE	MACSEN	£8.95	**£5.45**
HERBERT'S DUMMY RUN	MICRO-GEN	£9.95	**£6.45**
STAINLESS STEEL	MICRO-GEN	£8.95	**£5.45**
FIGHTING WARRIOR	MELBOURNE	£8.95	**£5.45**
LORD OF THE RINGS	MELBOURNE	£15.95	**£12.45**
STRIKE FORCE HARRIER	MIRRORSOFT	£9.95	**£6.45**
NEXUS	NEXUS	£9.95	**£6.45**
NODES OF YESOD	ODIN	£9.95	**£6.45**
ALIEN 8	ULTIMATE	£9.95	**£6.45**
GUNFRIGHT	ULTIMATE	£9.95	**£6.45**
TRASHMAN	VIRGIN	£7.95	**£4.45**

▼£3.00 OFF▼

HI RISE	BUBBLEBUS	£8.95	£5.95
SATELITE WARRIOR	AMSOFT	£8.95	**£5.95**
QUABBACAH	AMSOFT	£9.95	**£6.95**
XENO	ARGUS	£8.95	£5.95
THE BOGGIT	C.R.L.	£7.95	**£4.95**
ROOM 10	CRL	£7.95	£4.95
DOOMS DARK REVENGE	BEYOND	£9.95	£6.95
WAY OF THE TIGER	GREMLIN	£9.95	**£6.95**
GEOFF CAPES STRONGMAN	MARTECH	£8.95	**£5.95**
MATCH DAY	OCEAN	£9.95	**£6.95**
SWORDS & SORCERY	P.S.S.	£9.95	**£6.95**
JEWELS OF DARKNESS	RAINBIRD	£14.95	**£11.95**
KNIGHTLORE	ULTIMATE	£9.95	**£6.95**
BOUNTY BOB	U.S. GOLD	£9.95	**£6.95**
F.A. CUP FOOTBALL	VIRGIN	£7.95	**£4.95**

Cheques payable to Software Bargains. Goods despatched within 48 hours. Prices include VAT & Carriage. Access/Visa. Send your order to SOFTWARE BARGAINS, 8/8A Regent Street, Leeds LS7 4PE. Tel. 0532 687789/687735.

NAME ______________________

ADDRESS ______________________

____

POSTCODE ______________________

VISA

MAIL ORDER ONLY

SOFTWARE BARGAINS

YOUR AMSTRAD GAMES SPECIALIST.

SEND SAE FOR FULL LIST OF PRODUCTS

DYNAMITE DAN II

Mirrorsoft, £8.95 cass, £13.95 disk, joystick or keys

'Who is the superhero? What is the task to complete? Who is the arch-enemy?' Are these questions looming around your head? If so, relax; all will shortly be common knowledge.

Agent extraordinaire, Dynamite Dan, has quite a feat ahead of him: the world is being mesmerised by innocuous pop records. Dan, that desperate man, has to search a group of eight islands known as Arcanum. A record is hidden on each island. It must be located and played on a jukebox conveniently situated on the island.

SECOND OPINION

If it weren't for the horrendous graphics, the game might have something going for it. But as it is, just looking at it puts you off. The action doesn't seem much dissimilar to the original game, so platform fans may still find a fair bit of enjoyment here. **BW**

Dan, that incongruous man, appears on screen in his zeppelin. Colour-clashing is a thing of the past, is it not? Wrong! *Dynamite Dan II* has worse colour-mixing than some of the early Spectrum games – that is a difficult accomplishment, especially on the Amstrad. Nearly all the sprites are monocoloured.

Although the game has colour and graphics problems, there are certain delightful touches: Dan, that hydrocephaloid man, and all the other characters, objects and artefacts are wonderfully animated. Certain sprites have stunning movement patterns that will take a long time to work out.

While on his travels Dan, that anorexic man, encounters many wonderful inanimate items. These serve many purposes – some open gates and others build up his ever-diminishing energy. When picking up an object, a humoresque tune will reach your ears: at least some effort has been put into this department.

Apart from the awful graphics and colour attribute problems, *Dynamite Dan II* is an enjoyable game. There is plenty to explore, and it will keep you satisfied. **RpM**

FIRST-DAY TARGET SCORE
500

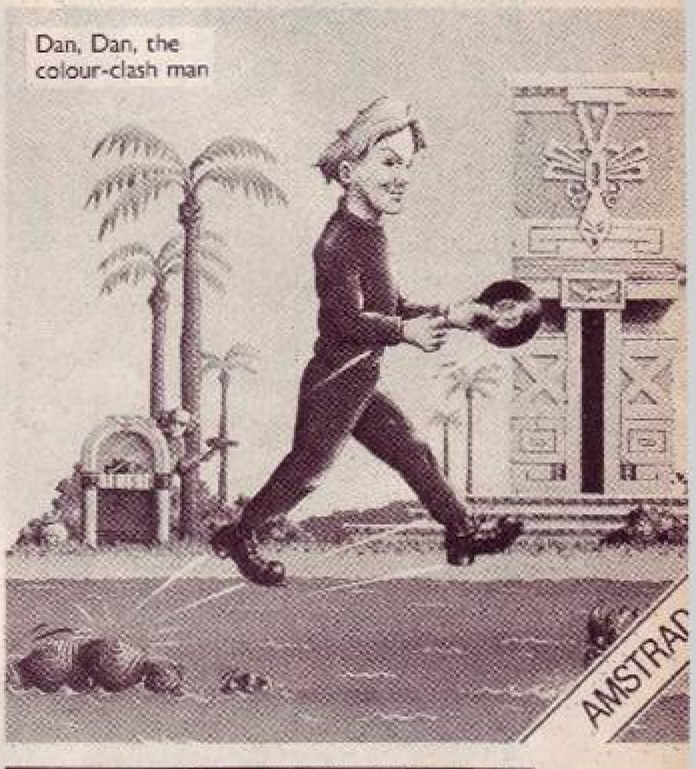
GREEN SCREEN VIEW
Even the colour-clash is visible. **RpM**

G O O D   N E W S

- ▶ **Wonderfully animated sprites.**
- ▶ **Task will take more than a couple of days to complete.**
- ▶ **Occasional sound is highly original.**

B A D   N E W S

- ▶ **Horrendous use of colour.**
- ▶ **Colour-clashing when sprites overlap.**



Dan, Dan, the colour-clash man

GRAPHICS	43%
SONICS	71%
GRAB FACTOR	64%
STAYING POWER	69%
A A RATING	66%

JAIL BREAK

Konami, £8.95 cass, £14.95 disk, joystick or keys

Konami is famous for its arcade games, which until now have been licensed by other software houses when being converted onto home computers. Now it's producing its own conversions. The first is a prison breakout in which you play a cop trying to get rid of all the escaped prisoners.

You won't have any trouble recognising what sort of game this is: it bears strong resemblances to *Green Beret* and *Ghosts'n Goblins*. You have to make your way through a right-to-left scrolling landscape, trying to complete gradually more-hazardous stages. To start with you are armed with just a gun but can get two more sophisticated weapons by rescuing hostages along the way.

There are three types of hostage who will give you either a weapon or bonus points. Care is needed because you can shoot them as well. The prisoners come in several varieties who can shoot bullets, throw things and pop out of manholes. You have to avoid the missiles and running into them. Most can be wiped out with any of the three weapons but some require a specific weapon before they can be disposed of.

SECOND OPINION

Have you played it in the arcade? If so, continue doing just that. The Amstrad version is boring: you die too easily, and it's infuriating. In fact the only thing going for it is the opening speech and music. **RpM**

The gameplay isn't very original in the wake of *Green Beret* and *Ghosts'n Goblins* and in terms of graphics it isn't very special either. It does have some digitized speech and good title music but this isn't much compensation when actually playing. It's certainly worth a look, but I hope Konami has better games to come.

BW


Fighting for freedom – yours, not theirs

FIRST-DAY TARGET SCORE
10,000

GREEN SCREEN VIEW
No problem spotting the bad guys. **BW**

G O O D   N E W S

- ▶ **Reasonable scrolling graphics.**
- ▶ **Those convicts are very tough.**
- ▶ **Addictive and demanding gameplay.**

B A D   N E W S

- ▶ **Too unoriginal.**
- ▶ **Too tough for my liking.**

GRAPHICS	68%
SONICS	62%
GRAB FACTOR	70%
STAYING POWER	61%
A A RATING	65%

COULD THIS BE YOUR PROGRAM?



ARCADE
SIMULATION
STRATEGY
ADVENTURE

SPACE
SPORTS
WAR
ACTION

Is your program good enough to fill this spot?

Will your game be the next No. 1 hit?

Are you looking for **top** royalties?

Are you writing for leading computers such as Commodore 64/128, C16/Plus-4, BBC/Electron, Atari, Amstrad, MSX, Spectrum or any other 6502/Z80 Micro.

Answer YES to any of these questions and we would like to hear from you. Send your program tape or disc, together with full instructions for fast evaluation. Be sure to state your computer type, memory, peripherals used and your name, address and telephone number.

ECU

34 BOURTON ROAD GLOUCESTER GL4 0LE
Tel (0452) 412572

P.S: We are also looking for 6502/Z80 programmers for urgent conversion work.

AMERICA'S CUP CHALLENGE

US Gold, £9.99 cass, £14.99 disk, joystick or keys

If you thought the America's Cup would be a tough simulation to put on computer, then give yourself a round of applause because that's how it's turned out. This is a very polished simulation with plenty of attention to detail, but unless you are a sailing buff it's going to be hard to get to grips with.

You can hardly have failed to notice the America's Cup going on in Australia this winter. Now you can sail the course against another player or the computer. You can sail at one of three skill levels but you'll find all of them tough. At it's most basic, the idea is to sail your yacht around a pre-determined course and cross the finish line before your opponent.

The instructions are very daunting unless you're familiar with sailing, even though the actual controls are quite straightforward. Unfortunately this also means that anyone who might be in a position to enjoy the complexity of the situation may be disappointed with the controls.

The graphics as the yachts travel the course are reasonable, but there's not a lot of noise except for the wind. This can be a very enjoyable long-term challenge if you can get to grips with it, but I wish the control methods had been simplified by more use of the keyboard instead of trying to operate everything with the joystick.

BW

SECOND OPINION

I don't like sailing, and I don't like this game. RpM

FIRST-DAY TARGET SCORE

Complete the course





G O O D   N E W S

- ▶ Very detailed simulation.
- ▶ Will absorb you for hours.
- ▶ Well presented, masses of background info.

B A D   N E W S

- ▶ Very complicated for the beginner.
- ▶ Bad choice of control mechanism.

GREEN SCREEN VIEW

Ahoy, I sea green. RpM

GRAPHICS	61%
SONICS	37%
GRAB FACTOR	57%
STAYING POWER	68%
A A RATING	62%

ROGUE TROOPER

Piranha, £9.95 cass, joystick or keys

Yet another comic-book hero is immortalised in machine-code. This one comes from *2000 AD*, where other great licensing characters like Judge Dredd and Strontium Dog reside. The game's been programmed by Design Design and has its unique graphic style.

Rogue is in a hostile alien environment where Norts wander around intent on putting holes in him. You have to guide him to find eight vid-tapes before taking off in a space-ship. The 3D graphics are very detailed and interesting and have nice, large moving characters. The landscape is split into several zones, each with its own distinctive graphics.

As you search for the tapes you can also find ammo for the gun and medical kits to heal your energy level. The Norts will shoot at you and if your energy reaches zero you're dead. It will take several shots to kill a Nort and many more to blow up the pillboxes that also appear.

The game map isn't very large and wraps round at the sides and the top. It won't take you long to explore it all and realise that collecting eight tapes isn't a very tall order. They are randomly placed but you've always got plenty of ammo and just have to take care with your energy levels. The three characters who are supposed to help you in the game – Helm, Gunnar and Bagman – aren't a lot of use, just passing comments as you perform actions.

It's a pleasant game for a while, but there just isn't enough of it.

BW

GREEN SCREEN VIEW

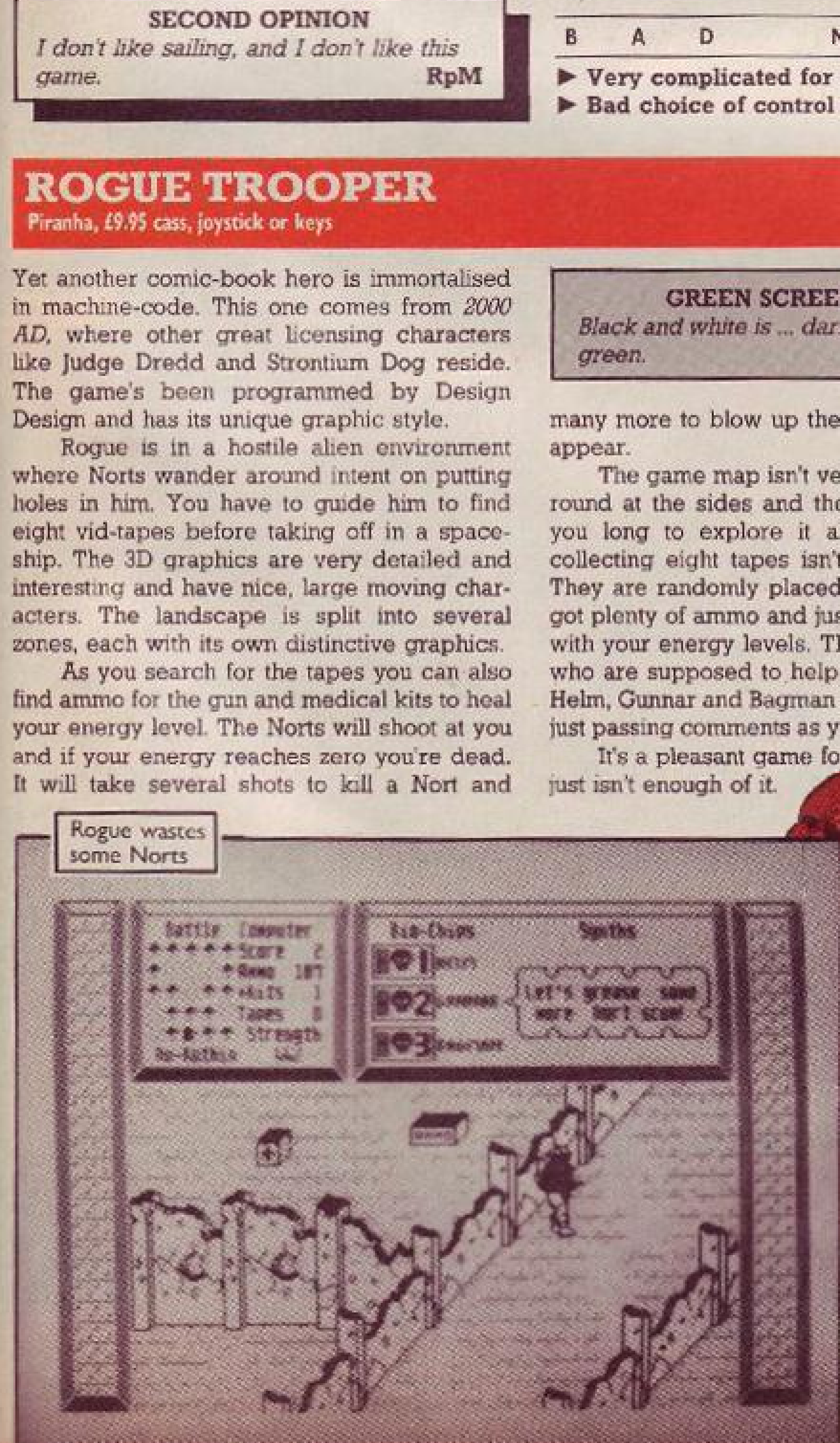
Black and white is ... dark green and light green. RpM

SECOND OPINION

You marvelled at the design work in 2000 AD. You were stunned at Rogue Trooper's inability to die. You will retch at the sight of this re-creation on your Amstrad's monitor. The graphics look as though they have been ported directly from another (lesser) computer, everything being black and white. The gameplay may be highly enjoyable: even the odd speech-bubble to add humour. But why leave it at that? This could have been a top-class game. RpM

FIRST-DAY TARGET SCORE

Get eight tapes



Rogue wastes some Norts



G O O D   N E W S

- ▶ Excellent 3D graphics.
- ▶ Initially enjoyable exploring.

B A D   N E W S

- ▶ Too easy to complete.
- ▶ You just walk around searching and shooting.

GRAPHICS	85%
SONICS	20%
GRAB FACTOR	72%
STAYING POWER	42%
A A RATING	59%

Star Raid

The Great Galactic Adven

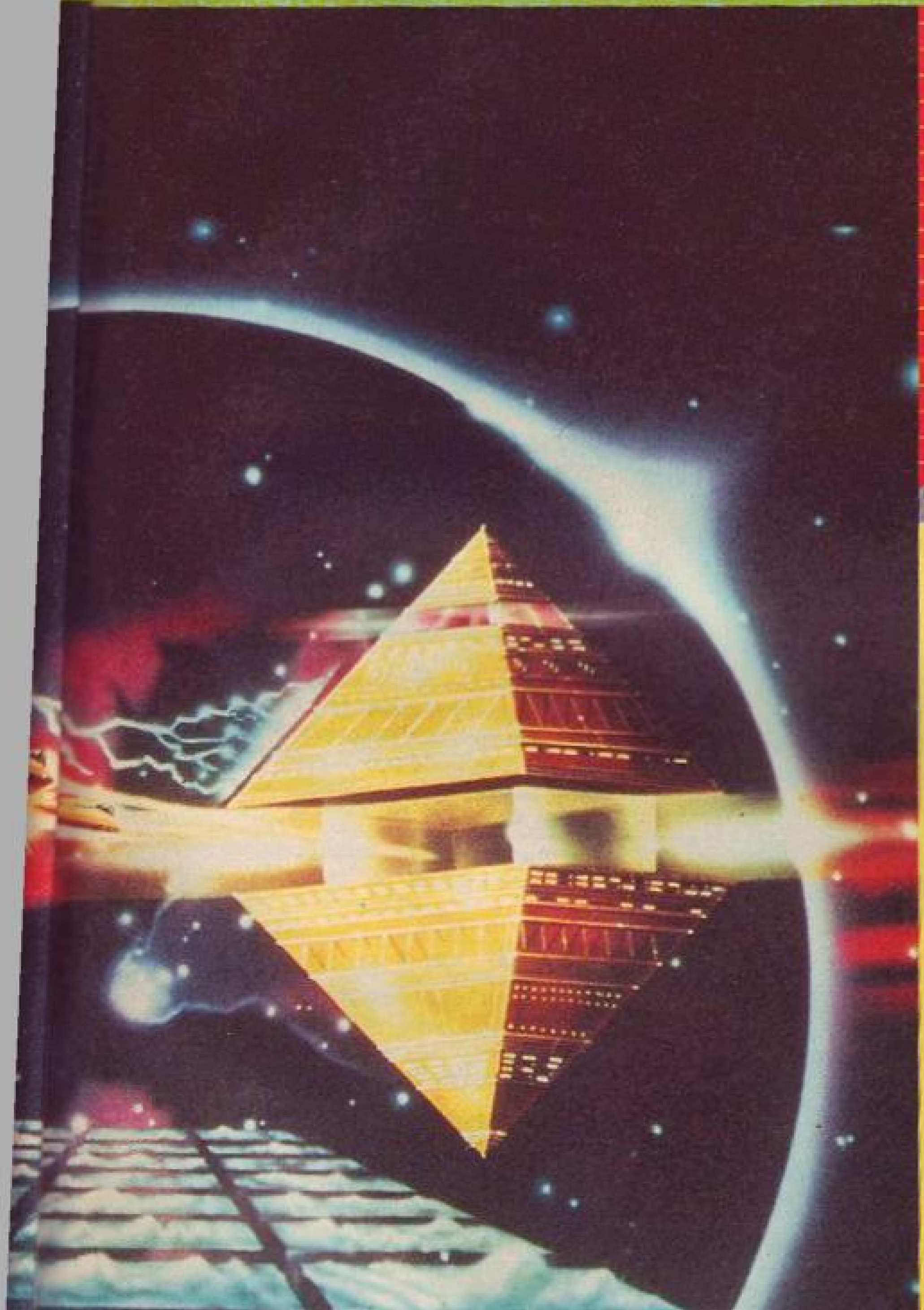


lers II

™

nture Continues

™ Star Raiders II is a trademark of the Atari Corporation.



The future of the Atarian Federation is in your hands as the evil Zylon Master, Chut, plans to destroy the Celos IV Star System. Pilot the hottest fighter in the galaxy, the Liberty Star and wipe out the Zylon Master Force and its super Attack Bases.

The sequel to the game that astounded the world STAR RAIDERS II™ will leave you stunned; there is simply no other game to compete with its sheer excellence.

AVAILABLE ON:

Amstrad CPC cassette	£9.99
Amstrad CPC disk	£14.99
Commodore 64/128 cassette	£9.99
Commodore 64/128 disk	£14.99
ZX Spectrum 48K/128K/+	£9.99

Electric Dreams

S O F T W A R E

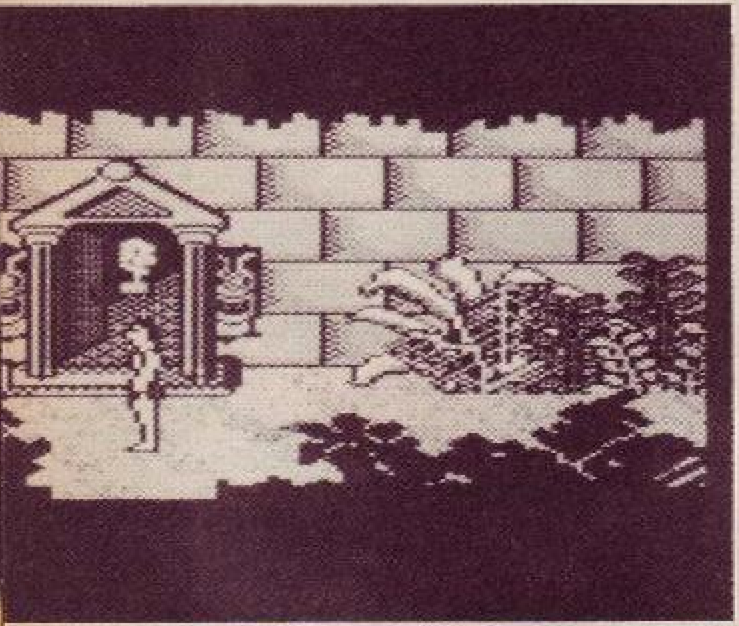
ELECTRIC DREAMS SOFTWARE, 31 CARLTON CRESCENT, SOUTHAMPTON SO1 2EW. TEL: (0703) 229694.

Mail Order: 23 Pond Street, Hampstead, London NW3 2PN

TARZAN
Martech, £9.95 cass, £14.95 disk, joystick or keys

The chest-beating hero has made it into pixels at last. And all for the best possible cause: rescuing Jane. By the time you arrive she'll probably have rescued herself, but it's the thought that counts. Your task as the yodelling apeman is to find seven coloured gemstones and return them to the chief of the tribe holding Jane hostage.

You've got three days to complete the task, which isn't a lot when you have to go through what Tarzan does. The screen display is a 2D side-view but cleverly constructed to give foreground scenery in silhouette and background scenery in full colour. In between is where the action takes place. You can run and somersault around but will encounter many problems.



SECOND OPINION
As soon as the game has loaded, you are treated to an easily recognisable melody – it's the theme tune to Tarzan ('What else!' you might say) and very nice too. It is colourful, enjoyable and humourous. I'm not sure whether Tarzan is supposed to be a Morris dancer; he certainly seems to throw himself around when fighting.
RpM

There are snakes and lions roaming the jungle. They lose you time if you hit them. Even more serious is being crawled on by a spider, which really eats up the time left. Another danger is spears thrown from the edges of the screen. These dangers have to be ducked or jumped. You can fight with a native who comes onto the screen, since you can't go over or under him. Enough punches and he'll fly off screen.

The adventure element of the game is quite tough: there are several objects to be found and used in your quest. Finding them is tough because of the jungle's dangers, but then you've got to work out what to do with them. For instance a rope will help you swing across a pit.

There are some nice touches in the game like the scenery and the puzzling. I found the fighting gets on your nerves, but it's there to make things tougher. The music is good, and you'll need to like it because it plays throughout the game, and the game is going to take a lot of solving. **BW**

FIRST-DAY TARGET SCORE
1 gemstone

G O O D N E W S
- **Attractive scenery.**
- **Night and day lighting.**
- **Good mix of arcade action and puzzles.**
- **Easy to explore but tough to crack.**

B A D N E W S
- **Fighting can become tedious.**
- **May be too hard.**

GRAPHICS	76%
SONICS	68%
GRAB FACTOR	70%
STAYING POWER	72%
A A RATING	71%

ANNALS OF ROME
PSS, £12.95 cass, £17.95 disk, joystick or keys

Survival of the Roman Empire is the name of the game. *Annals of Rome* is a strategy game in which you deplete commanders and soldiers to different areas of the globe. They must crush rebellion and fight wars to ensure the growth of almighty Rome.

GREEN SCREEN VIEW
Visible to the very last century.

G O O D N E W S
- **Will take many nights to win this one.**
- **Careful planning is necessary to succeed.**
- **Lots of strategy and thought required.**

B A D N E W S
- **The odd beep is the only sound you'll hear.**
- **£13 is a bit much.**

GRAPHICS	53%
SONICS	35%
GRAB FACTOR	72%
STAYING POWER	76%
A A RATING	74%

ONE
Infogrames, £9.95 cass, £14.95 disk, joystick or keys

A cute Valentin has to be guided through 30 rooms, generally causing mayhem, collecting objects and annoying his babysitter Alfred. While collecting objects in buckets, Valentin must run from Alfred. If he is caught, a good beating is what he will get.

GRAPHICS	71%
SONICS	72%
GRAB FACTOR	69%
STAYING POWER	73%
A A RATING	73%

G O O D N E W S
- **Very colourful detailed graphics.**
- **Hilarious cartoon-like characters.**
- **When Valentin is being punished, you'll be in stitches.**
- **Alfred's facial expressions are riotous.**

B A D N E W S
- **Why only 30 rooms?**

GREEN SCREEN VIEW
All visible.

XARQ
Electric Dreams, £9.99 cass, £14.99 disk, joystick or keys

In your hi-speed hydraboat you must enter Xarq and flood the Zimmerman Trenches. There is a fortress of silicon and steel to blast your way through. Graphically very similar to *Panzadrone*; you will have to use all your might to battle through the Xarqon defense system.

G O O D N E W S
- **Tough shoot-em-up/exploration task.**
- **Vivid colours.**

B A D N E W S
- **Horrid blocky graphics.**
- **You will need nimble fingers to use keyboard.**
- **Wishy-washy sound.**

GRAPHICS	43%
SONICS	47%
GRAB FACTOR	52%
STAYING POWER	54%
A A RATING	52%

ASTERIX
Melbourne House, £9.95 cass, joystick or keys

True to Melbourne House's style, Asterix is a beat-em-up-style game. Obelix accidentally shatters the magic cauldron, sending pieces flying. You (as Asterix) and Obelix must find all the pieces and bring them back to the village. While searching, you will encounter Romans and wild boar, which must be fought off.

GREEN SCREEN VIEW
All is visible.

SUMMARY SECTION SUMMARY SECTION SUMMARY SECTION

GRAPHICS	57%	
SONICS	61%	
GRAB FACTOR	53%	
STAYING POWER	51%	
A A RATING	51%	

G O O D   N E W S

▶ Nice to see Asterix on the computer screen.
▶ Large colourful sprites resembling those unconquerable cartoon Gauls.

B A D   N E W S

▶ Fighting scenes are a joke: they jump up and down like the highland fling.
▶ Awful flickering at the best of times.
▶ Occasionally half a character will disappear and not return for a loooonng time.
▶ Collision detection is virtually non-existent.

THE GREAT ESCAPE

Ocean, £8.95 cass, joystick or keys

You take the role of a prisoner of war trying to get free. By analysing the bell routines and the guard patrol system, it is possible to work out an escape routine. Many items will be found on the way, either helping or hindering you. If you don't make it, it's a frog-march into solitary confinement.

G O O D   N E W S

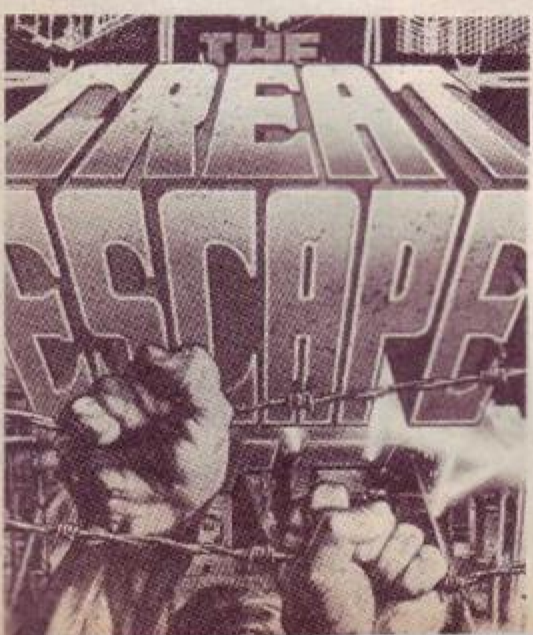
▶ Nice effect of flag moving up and down pole to indicate camp status.
▶ Enjoyable game if graphics are ignored.
▶ Novel concept.

B A D   N E W S

▶ Horrendous jerky scrolling.
▶ Pitiful graphics.

GREEN SCREEN VIEW
Colour is non-existent: green screen is equally bleak but clear.

GRAPHICS	49%	
SONICS	52%	
GRAB FACTOR	65%	
STAYING POWER	68%	
A A RATING	66%	



DEFCOM

Quicksilva, £8.95 cass, £14.95 disk, joystick or keys

Earth is threatened once more; invading aliens have taken over the defence satellites turning them into deadly weapons. Up you go in your trusty fighter, orbiting the Earth. You must blast the aliens then move on to the satellites - destroy them before it's too late.

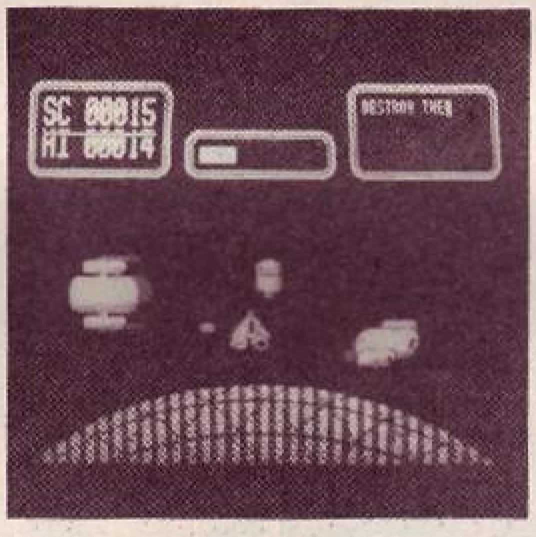
G O O D   N E W S

▶ Music is the best part of the game.

B A D   N E W S

▶ Colour has been sparingly used.
▶ Some awfully basic shapes for your fighter and alien ships.
▶ Movement is awkward.
▶ Boring and repetitive.

GRAPHICS	44%	
SONICS	73%	
GRAB FACTOR	46%	
STAYING POWER	33%	
A A RATING	38%	



ELEVATOR ACTION

Quicksilva, £8.95 cassette, joystick or keys

Remember *Mission Elevator*? Well, this offering from Quicksilva is very similar. The game involves you guiding Agent Otto through all red doors to the bottom of the building: this can be accomplished by either climbing down stairs or using lifts. Otto can kick, shoot, duck, run and jump his way out of trouble - this is necessary as gangsters stalk the corridors.

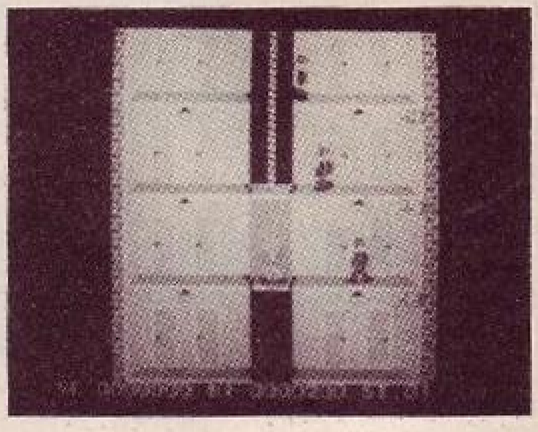
G O O D   N E W S

▶ Colourful and detailed graphics.
▶ Melodious tune to accompany your travels.
▶ Dying is rather spectacular.

B A D   N E W S

▶ Too similar to *Mission Elevator*.
▶ The gangsters can be a handful.

GREEN SCREEN VIEW
Going up or going down? Yep, it's all clear.



GRAPHICS	62%	
SONICS	74%	
GRAB FACTOR	61%	
STAYING POWER	69%	
A A RATING	67%	

BREAKTHRU

US Gold, £9.95 cass, £14.95 disk, joystick or keys

You are miles behind enemy lines. Your mission is to retrieve PK430, a revolutionary fighter. Your equipment is the world's most sophisticated armed vehicle. Traveling over mountains, bridges, and prairies you will encounter minefields, landslides, rockfalls, flamethrower tanks and armourmed fighting vehicles. You must break through.

GREEN SCREEN VIEW
Certain parts of the scenery lose out, but on the whole it's visible.

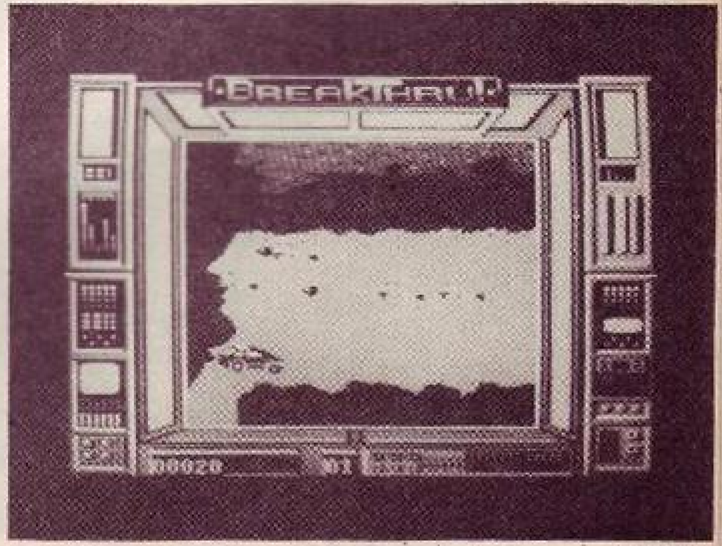
G O O D   N E W S

▶ Lots of different enemy.
▶ Variety of scenery.
▶ Good for a quick blast.

B A D   N E W S

▶ Pathetic collision detection.
▶ Sound effects will make you ill.
▶ Gameplay is very frustrating.

GRAPHICS	62%	
SONICS	43%	
GRAB FACTOR	56%	
STAYING POWER	59%	
A A RATING	53%	

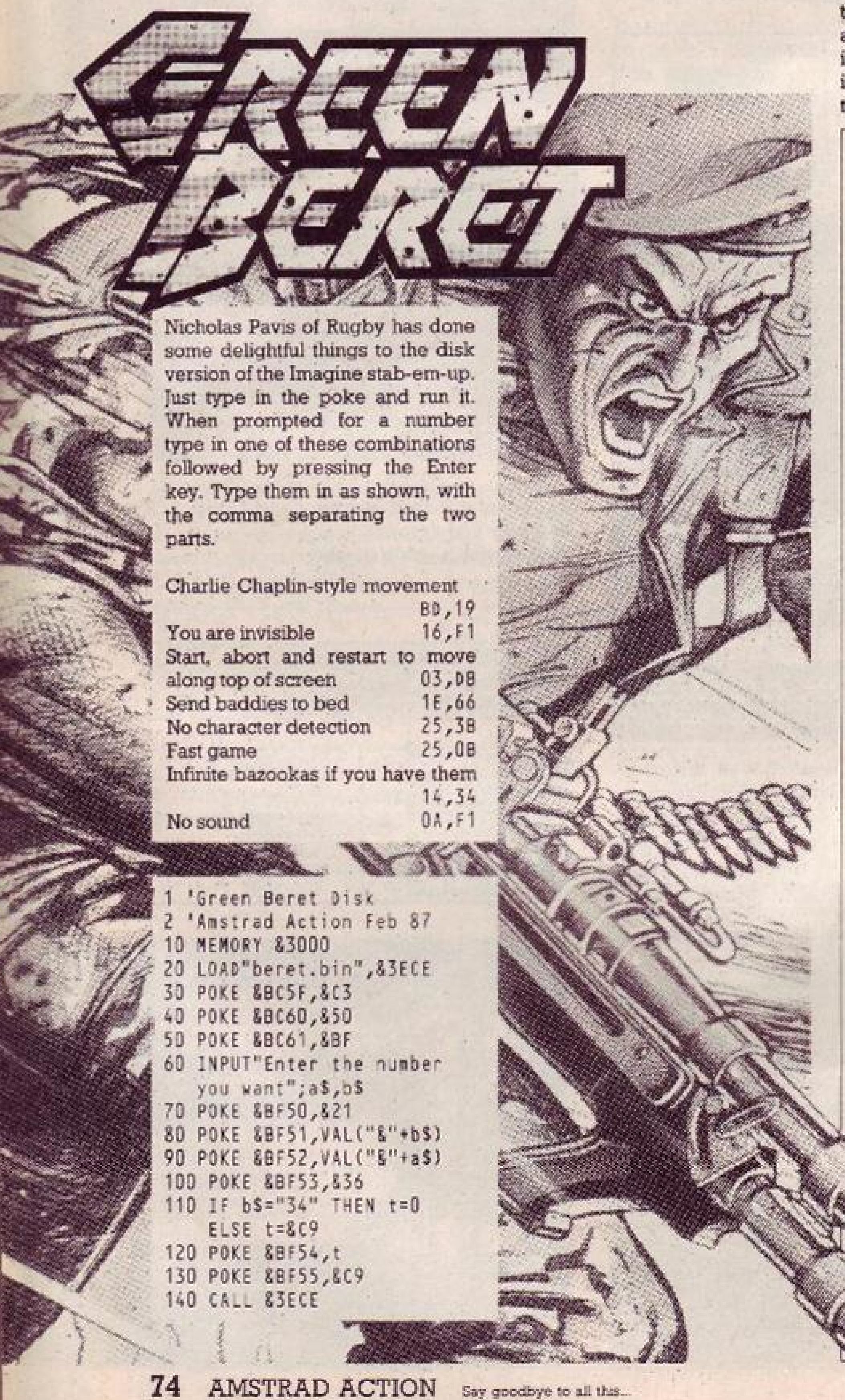




CHEATMODE



Bob Wade checks out your tips, pokes and game-busting ploys. The best ones could win a entire issue's *AA* Raves! So why not send YOUR latest gem to: Cheat Mode, *Amstrad Action*, Somerton, Somerset, TA11 5AH.



Nicholas Pavis of Rugby has done some delightful things to the disk version of the Imagine stab-em-up. Just type in the poke and run it. When prompted for a number type in one of these combinations followed by pressing the Enter key. Type them in as shown, with the comma separating the two parts.

Charlie Chaplin-style movement	BD,19
You are invisible	16,F1
Start, abort and restart to move along top of screen	03,DB
Send baddies to bed	1E,66
No character detection	25,3B
Fast game	25,0B
Infinite bazookas if you have them	14,34
No sound	0A,F1

```
1 'Green Beret Disk
2 'Amstrad Action Feb 87
10 MEMORY &3000
20 LOAD"beret.bin",&3ECE
30 POKE &BC5F,&C3
40 POKE &BC60,&50
50 POKE &BC61,&BF
60 INPUT"Enter the number
   you want";a$,b$
70 POKE &BF50,&21
80 POKE &BF51,VAL("&"+b$)
90 POKE &BF52,VAL("&"+a$)
100 POKE &BF53,&36
110 IF b$="34" THEN t=0
    ELSE t=&C9
120 POKE &BF54,t
130 POKE &BF55,&C9
140 CALL &3ECE
```

Herbert's Dummy Run

Remember Phil Howard's poke for the Mikro-Gen game that got lost a few months back? Well he sent it in again, and this time we promise it's correct. Entered using Method 1, it gives infinite lives.

```
1 'Herbert's Dummy Run
2 'Amstrad Action Feb 87
10 DATA 21,08,1d,36
15 DATA 00,c3,03,01
20 MEMORY &1FFF
30 FOR x=&BE03 TO &BE0A
40 READ a$
50 POKE x,VAL("&"+a$)
60 NEXT
70 LOAD""
80 POKE &2030,&BE
90 CALL &2000
100 MODE 2
110 PRINT"Put Trailblazer
disk in drive A then hit
a key"
115 WHILE INKEY$="":WEND
120 x=&4001
130 IF it=1 THEN RESTORE
    180:GOSUB 170
140 IF ij=1 THEN RESTORE
    190:GOSUB 170
150 RESTORE 200:GOSUB 170
160 x=&8000:RESTORE 210
165 GOSUB 170:CALL &8000
170 READ a$
175 IF a$<>"xx" THEN POKE
    x,VAL("&"+a$):x=x+1:
    GOTO 170 ELSE RETURN
180 DATA 21,00,00,22,2f,
    22,xx
190 DATA 3e,00,32,50,23,
    xx
200 DATA c3,00,04,xx
210 DATA 21,00,40,11,20,
    03,01,00,01,ed,b0
220 DATA 21,2f,80,3e,84,
    77,cd,d4,bc,79,32
230 DATA 31,80,22,2f,80,
    21,00,01,11,00,00
240 DATA 0e,41,df,2f,80,
    21,21,03,22,82,01
250 DATA c3,00,01,xx
```

Ikari Warriors

Nicholas Green of Leatherhead has some invaluable advice for Elite's latest bomb-and-shoot-em-up.

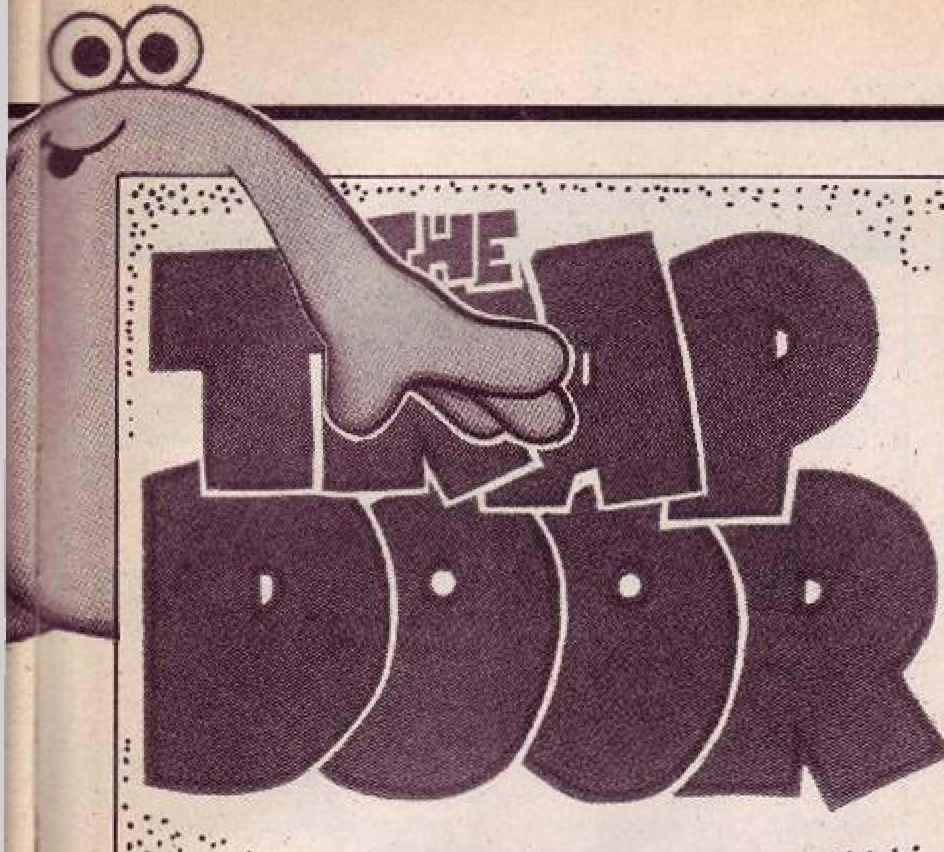
The section leading up to the first tank is probably one of the trickiest in the game. Grenade and shoot frequently. Bullets are easily replenished by picking up supplies. Always slow down to kill green soldiers: these carry supplies which you can pick up. When you come to the pillbox, stand below it and slightly off-centre, then grenade it.

When you're in the tank don't waste bombs – just run over most soldiers. If the tank is hit and starts to flash, get out as soon as possible by holding the fire button down and move well away from it. To blow up an enemy tank stand out of its firing range about an inch from the edge of the screen. Fire a grenade as the tank moves across the screen and move up with it. If the tank fires in line with you, quickly move down again.

When a helicopter arrives keep firing grenades and walk forward in line with it. When crossing water keep well away from the blue blobs because they kill even when you aren't touching them. You can shoot them only when they appear or disappear at the edge of the screen.

On the final blue-and-yellow section the small box-like things have no function. But be careful of the helicopters. On the barracks you should pick off the men before advancing through the cleared area. Try to take on bazooka firers from the side as they always fire down the screen, but with a long range.

Stay out of the water as much as possible: you move slower and are therefore more vulnerable. At the end you get a million points and start again from the beginning with seven lives. Keep away from the edges of the screen because enemy soldiers can blunder aimlessly into you, giving you no time to react.



The Trap Door

The solution to this very enjoyable game comes from Kenneth Bamford of New Ollerton. It tells you everything you need to do, but you may still find a problem or two in actually carrying out the tasks.

Can of Worms: Easy-peesy this one. Simply get the can from the room just left of the start. Then go and open the trap door and fill it with worms. Watch out for Drutt – he doesn't give you much chance to get them!

Fried Eggs: Not too hard. Get the pan from the same room as the can and take it to the room just right of the start. Drop it in front of the stairs, go back to the can room and tip up the wicker basket to reveal the bullet. Take this and put it next to the trap door. Open the trap door and let the bird out. If another creature starts to appear, close the door quickly and try again.

Once the bird is out, put the bullet on the trap door and wait for the bird to come back. As it passes over the door, open and close it very quickly, stunning the bird. Run to the pan and the bird will lay an egg – catch it. Repeat this four times and then place the pan on the small stove until it flashes, then send it up.

Eyeball Crush: It's a good idea to try to set this up beforehand. It's not hard but takes a lot of time to do. First plant the eyeball seeds in the plant pots in the far room up the stairs. Then push the vat up to the ledge in the room where it's found. Wait until the eyeballs drop off the plants and put them in the vat by dropping them from the ledge above it.

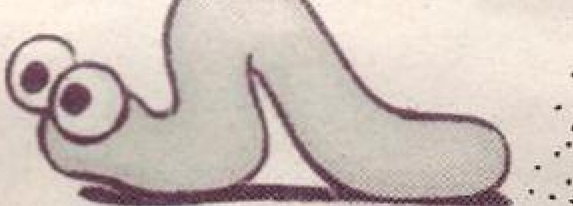
Push the vat just to the right of the trap door. Get the bottle from the room where the vat was and place it under the pipe leading from the bottom of the vat. Let the bouncing creature with boots on out of the trap door. If the vat is in the right place the crush will be bottled; if not, see where the creature bounces and push the vat to that spot.

Boiled Slimies: Again it's a good idea to have this one ready-planned because it's the hardest and most time-consuming. Get the cauldron from the can room and push it to the same place as you put the pan for the eggs. Go to the only room downstairs and get the slimies one by one. Drop them into the cauldron by climbing the stairs and dropping them into it from above.

Let out the fire-breathing creature. Go and stand right in front of the cauldron. Wait until the creature is about to breathe fire at you and then move away. While it's spinning around, move back in front of the cauldron and repeat the action about seven times. Go to the weight and lift it to the top, then move up one step. The lift has a pressure-pad; as soon as the creature comes under it it will be destroyed. Quickly push the cauldron onto the dumb-waiter and send it up.

Clearing Up: You have to be playing Superberk level to do this. When you get here, everything has to be got rid of. You can crush things under the weight or send them down the trap door. When you've finished send the lift up and a safe comes down. Push it under the weight and hey presto...

General Tip: When you open the trap door watch out for the ghost, because it's very irritating. To get rid of it pick up a worm and walk into it.



ZUB

Having trouble with the teleport system? Well, Gerard Fazakerley from Liverpool has the answer.

Planet	*Base destinations:* *Left*	*Middle*	*Right*
Zub 1	2	3	2
Zub 2	1	3	3
Zub 3	1	2	4
Zub 4	6	5	3
Zub 5	4	6	7
Zub 6	7	4	5
Zub 7	8	9	6
Zub 8	7	9	7
Zub 9	7	10	8
Zub 10	9	9	9

If you're uncertain whether the next base is upper right or left, always travel to the left when trying to get your bearings. Crashing into the barrier at left means you can stay on the platform, whereas you fall off at the right.

If you're further along the left side of the screen, ensure that you're pointing to the right for firing, as the aliens come down from the centre. The reverse obviously applies when you're on the right. It's far easier to get into a safe position to shoot the aliens by waiting for them to come to you. Single touches allows correct positioning on the platform.

Before making the last leap onto the transporter, check your life indicator. If it's considerably above the gun then carry on but if it's only just above it then reduce energy a bit so that you can get extra power pills at the end of the level.



Poke methods

Here is how to input the majority of *Cheat Mode* pokes. The instructions for each poke tell you which of the two different methods to use. If you have a 664 or 6128, you'll have to type |tape before typing either.

Method 1

Make sure that you've rewound the game tape to the beginning. Now type in the poke listing. Then type RUN and press the Enter key. (Don't use the key marked CTRL or Control; that would stop the poke from working.) Press the Play key on the cassette deck, and then any key on the main keyboard – the spacebar will do nicely. The tape should now start to play through in the normal way.

Method 2

For this method, you have to skip the first bit of the game program.

To do that, start by rewinding the game tape to the beginning. Now type in the listing.

Then type CAT and press Enter. Start the tape by pressing Play and then any key. Then watch the screen.

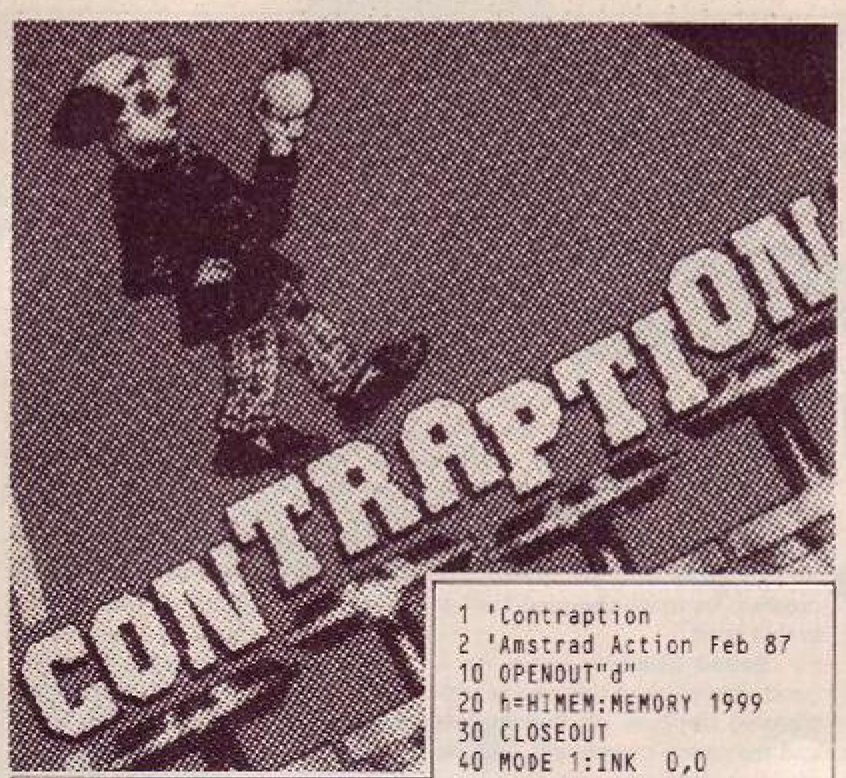
After a little while you'll get the message

Found *something* block 1

It doesn't matter what the *something* actually is; this will vary from one game to another. If the instructions with the poke just tell you to skip the first block, you should stop the tape here.

If the instructions tell you to skip several things, stop the tape when the Found message comes up for the last thing you're trying to skip.

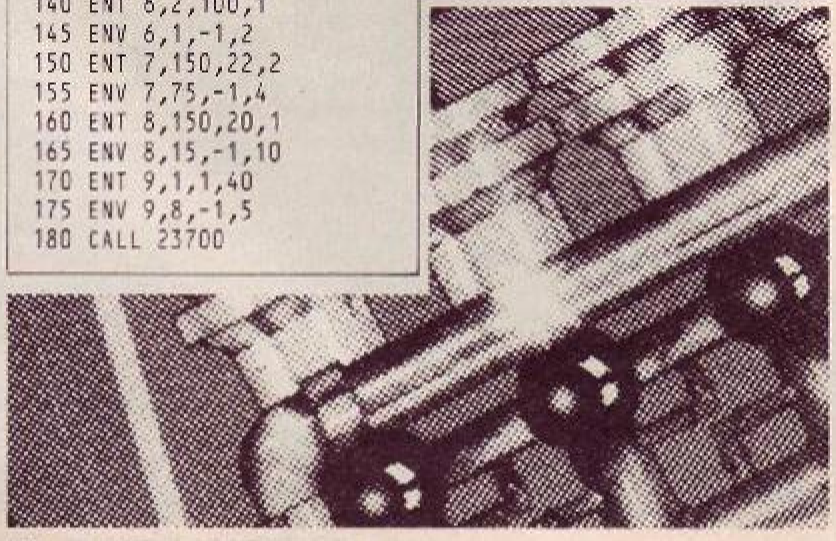
Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape running.



Roger Payne of Alcester has come up with infinite time and invulnerability for the Audiogenic platform game, making it more than easy. Enter using Method 2 to skip the first block called TAPE.

```
1 'Contraption
2 'Amstrad Action Feb 87
10 OPENOUT"d"
20 h=HIMEM:MEMORY 1999
30 CLOSEOUT
40 MODE 1:INK 0,0:BORDER 0
42 INK 1,12,24:INK 2,20,10
44 INK 3,0:SPEED INK 8,8
50 LOCATE 14,6:PEN 1
52 PRINT"contraption"
54 LOCATE 16,10:PEN 2
56 PRINT"Loading"
60 LOCATE 5,15:PEN 3
62 LOAD"!":CALL 28650
64 LOAD"!"
70 POKE &5CE3,0:POKE
   &5CE4,0:POKE &5CE5,0
80 POKE &5CE6,0:POKE
   &5CE7,0:POKE &5CE8,0
90 ENT 1,50,-2,1,40,4,1
95 ENV 1,15,-1,6
100 ENT 2,180,-100,1
105 ENV 2,15,-1,12
110 ENT 3,5,90,1
115 ENV 3,1,0,5
120 ENT 4,220,90,1
125 ENV 4,10,-1,22
130 ENT 5,220,-99,1
135 ENV 5,11,-1,20
140 ENT 6,2,100,1
145 ENV 6,1,-1,2
150 ENT 7,150,22,2
155 ENV 7,75,-1,4
160 ENT 8,150,20,1
165 ENV 8,15,-1,10
170 ENT 9,1,1,40
175 ENV 9,8,-1,5
180 CALL 23700
```

```
1 'Contraption
2 'Amstrad Action Feb 87
10 OPENOUT"d"
20 h=HIMEM:MEMORY 1999
30 CLOSEOUT
40 MODE 1:INK  0,0
50 BORDER 0
60 INK 1,12,24
70 INK 2,20,10
80 INK 3,0:SPEED INK 8,8
90 LOCATE 14,6:PEN 1
100 PRINT"contraption"
110 LOCATE 16,10:PEN 2
120 PRINT"Loading"
130 LOCATE 5,15:PEN 3
140 LOAD"!":CALL 28650
150 LOAD"!"
160 POKE &5CE3,0
170 POKE &5CE4,0
180 POKE &5CE5,0
190 POKE &5CE6,0
200 POKE &5CE7,0
210 POKE &5CE8,0
220 ENT 1,50,-2,1,40,4,1
230 ENV 1,15,-1,6
240 ENT  2,180,-100,1
250 ENV 2,15,-1,12
260 ENT 3,5,90,1
270 ENV 3,1,0,5
280 ENT 4,220,90,1
290 ENV 4,10,-1,22
300 ENT 5,220,-99,1
310 ENV 5,11,-1,20
320 ENT 6,2,100,1
330 ENV 6,1,-1,2
340 ENT 7,150,22,2
350 ENV 7,75,-1,4
360 ENT 8,150,20,1
370 ENV 8,15,-1,10
380 ENT 9,1,1,40
390 ENV 9,8,-1,5
400 CALL 23700
```



February winners and March challenges

Several regulars have done the business this month and deservedly got themselves prizes. Pride of place goes to **Tony Hoyle** for his *Trailblazer* and *Doomdark* pokes.

The runners-up are: **Nicholas Pavis** for his *Green Beret* poke, **Peter Featherstone** for his *Lightforce* poke, **Kenneth Bamford** for his *Trap Door* tips, **Ian Curry** for his *Back to Reality* map, and **Phil Howard** for his *Lightforce* and *Herbert's Dummy Run* pokes.

One prize that won't be going out is that for Richard Farley for the *Infiltrator* tips in last issue. They are the same, word for word, as those printed in another magazine. I'll remind you again that this sort of thing is an infringement of the copyright laws and you're doing nobody any favours by indulging in it. We can't check every other magazine ourselves, but if we do discover copying it will end up in the bin where rubbish belongs. Maybe I'll start sending out letter bombs as prizes to the worst offenders.

Once again we're setting you some devilishly difficult challenges:

- ► **A map of *Firelord*.**
- ► **Infinite-flame poke for *Thanatos*.**
- ► **A playing guide for *Starglider*.**
- ► **Infinite-strength poke for *Gauntlet*.**
- ► **A playing guide for *Aliens*.**

Timothy Dowd from Formby has finished the third part of the game. Here's his dramatic solution.

After loading the game you're asked the name of the warehouse; answer 'Tiptree'. You'll find yourself at the top left corner of the screen, your first objective being to clear the warehouse of Russian soldiers. Examine your machine-gun to make sure it works, then move east and set up your booby-trap. Move west then south. Now you have to kill the Russian captain. Drop the screwdriver and you find yourself hiding in the shadows. The captain comes out with his small pistol and you sneeze (well-timed, isn't it?). He comes closer and you're left to sort him out. Get your knife out and use it.

Pick the screwdriver up, move east and use your grenade – just look at the mess you make. The boobytrap you set goes off, you sneak into the room and find a soldier looking for his gun. Use yours first. Move east and use your wirecutters to shut off the alarm, then north and blast the door off with your shotgun.

You're in a room with a filing cabinet. Use the shotgun again and you go east to a room with another cabinet. Use the shotgun again and you come to a third cabinet. If you use your geiger-counter it goes bananas. This is obviously the room with the nuke, so look among your icons for a numeric keypad. The code is 12051987, after the date discovered in part two.

Use the screwdriver to take the plate off. Look and you see three coloured buttons – press red, yellow and then green. Now you have to hurry, change icons and use your wirecutters: *cut the*

Terra Cognita

IA Stevenson of Sleaford has come up with infinite lives for the Codemasters budget game. Enter it using Method 2 to skip the first block called TERRA-COGNITA.

```
1 'Terra Cognita
2 'Amstrad Action Feb 87
10 OPENOUT "d":MEMORY 999
20 INK 0,26:BORDER 0
30 INK 1,0:MODE 2
40 LOAD"!",&C000
50 LOAD"!",1000
60 POKE &19AE,0
70 LOAD"!",20000
80 CALL 1004
```



TRAILBLAZER

Tony Hoyle of St Annes has done a lovely job on the Gremlin game, making use of an intentional cheat mode and throwing in two of his own. The poke allows you to choose several sprites and types of track, as well as to have infinite time and jumps. Just type it in, and run it with the game disk in the drive.

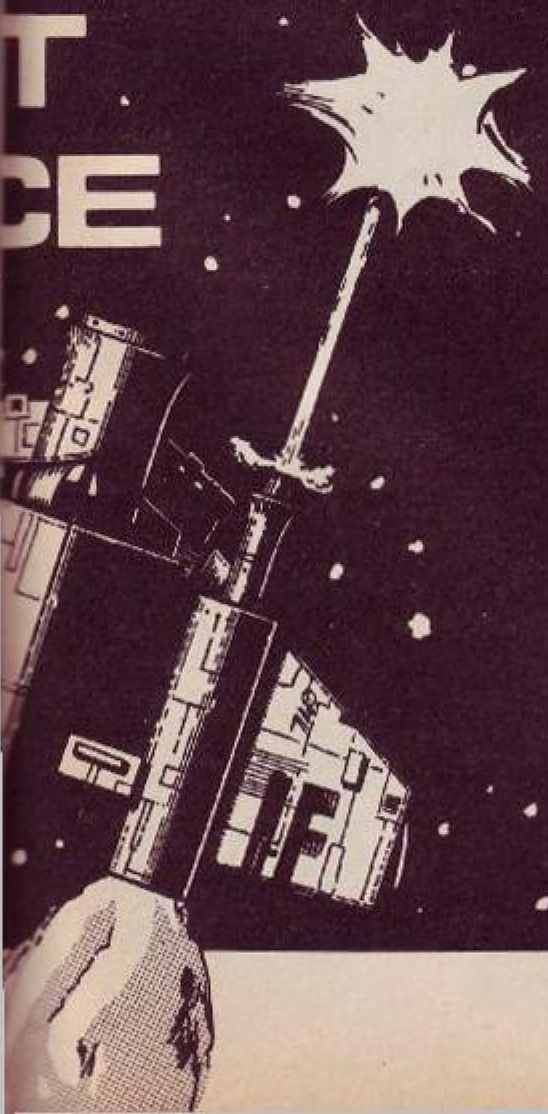
```
1 'Trailblazer
2 'Amstrad Action  Feb 87
10 MODE 2
20 PRINT"Track?"
25 PRINT"(0=normal, 1=cur
 ved, 2=crossed, 3=bridge
 d)":INPUT track
30 IF track<0 OR track>3
 THEN 20
40 PRINT:PRINT
42 PRINT"Sprite"
44 PRINT"(0=ball, 1=sprin
 g, 2=space invader, 3=cu
 be, 4=sphere, 5=helicopt
 er, 6=thing, 7=gremlin)"
50 INPUT sprite
60 IF sprite<0 OR sprite
 >7 THEN 40
70 PRINT:PRINT
72 INPUT"Infinite time
 (Y/N)?",t$
74 t$=UPPER$(t$)
76 IF t$="Y" THEN it=1
 ELSE IF t$="N" THEN
 it=0 ELSE GOTO 70
80 PRINT:PRINT
82 INPUT"Infinite jumps
 (Y/N)?",t$
84 t$=UPPER$(t$)
86 IF t$="Y" THEN ij=1
 ELSE IF t$="N" THEN
 ij=0 ELSE GOTO 80
90 POKE &4000,64*track
 +sprite
100 MODE 2
110 PRINT"Put Trailblazer
 disk in drive A then hit
 a key"
112 WHILE INKEY$="":WEND
120 x=&4001
130 IF it=1 THEN RESTORE
 180:GOSUB 170
140 IF ij=1 THEN RESTORE
 190:GOSUB 170
150 RESTORE 200:GOSUB 170
160 x=&8000:RESTORE 210
165 GOSUB 170:CALL &8000
170 READ a$
175 IF a$<>"xx" THEN POKE
 x,VAL("&"+a$):x=x+1:GOTO
 170 ELSE RETURN
180 DATA 21,00,00,22,2f,
 22,xx
190 DATA 3e,00,32,50,23,
 xx
200 DATA c3,00,04,xx
210 DATA 21,00,40,11,20,
 03,01,00,01,ed,b0
220 DATA 21,2f,80,3e,84,
 77,cd,d4,bc,79,32
230 DATA 31,80,22,2f,80,
 21,00,01,11,00,00
240 DATA 0e,41,df,2f,80,
 21,21,03,22,82,01
250 DATA c3,00,01,xx
```

Doomdark's Revenge

Tony Hoyle of St Annes has completed a challenge and given you control over all 128 characters in the game. Use Method 1. When you select a character in the game you'll have all 128 to choose from. And it will never go dark – an infinite daylight poke.

```
1 'Doomdark's Revenge
2 'Amstrad Action Feb 87
10 MEMORY &17FF
15 LOAD"ddrl",&1800
20 POKE &1859,0
25 POKE &185A,&BE
30 x=&BE00
40 READ a$
45 IF a$<>"xx" THEN POKE x
,VAL("&"+a$):x=x+1:GOTO 80
50 CALL &1800
60 DATA 3e,00,32,06,9b,21
70 DATA 1f,3e,22,9b,91,3e
80 DATA c9,32,9d,91,c3,50
90 DATA 82,xx
```

A real treat for owners of FTL's shoot-em-up: two tape pokes and one for the disk. Peter Featherstone of Leeds has produced a poke for the cassette version that gives infinite lives and invulnerability (lines 100 and 110). RpM then converted it to work with the disk version. Enter the tape poke using Method 1. The disk poke you just type in, save onto the game disk and run.



Disk poke

```
2 'Amstrad Action  Feb87
10 OPENOUT"Y":MEMORY &500
20 MODE 1:LOAD"DISC"
30 FOR t=&641 TO &660
40 READ a$
45 POKE t,VAL("&"+a$)
50 NEXT t
60 CALL &5D0
70 DATA 21,B8,1C,CD,83,BC
80 DATA CD,7A,BC,21,DA,79
90 DATA 36,00,21,87,79,36
100 DATA C9,0E,FF,21,31
110 DATA 73,CD,16,BD,00
120 DATA 00,00,00,C9
```

Tape poke

```
1 'Lightforce 1
2 'Amstrad Action  Feb 87
10 MODE 1
20 f=&BE00
30 READ a$
35 IF a$="999" THEN
   GOTO 60
40 POKE f,VAL("&"+a$)
50 f=f+1:GOTO 30
60 OPENOUT"d"
65 MEMORY &5DB
70 LOAD"!"
80 POKE &642,195
83 POKE &643,0
86 POKE &644,190
90 CALL &5DC
100 DATA af,32,da,79
110 DATA 3e,c9,32,87,79
120 DATA 0e,ff,21,31,73
130 DATA cd,16,bd,999
```

Meanwhile, Phil Legend-in-his-own-Assembler Howard of Mapperley has been rummaging around to find some lovely little pokes as well. It not only gives you four bullets every time you press the fire button, but provides the Escape key as a pause key (restart with Enter). When you restart with the '+' key you get an extra life. Use Method 1.

```
1 'Lightforce 2
2 'Amstrad Action Feb 87
10 DATA 00,3e,ff,32,8a,
   8a,3a,00,be,3c,32
20 DATA 00,be,fe,03,d8,
   af,32,00,be,3e,ef
30 DATA 32,8a,8a,c9,21,
   2b,7b,36,c3,23,36
40 DATA 01,23,36,be,21,
   30,85,36,cd,23,36
50 DATA 33,23,36,be,c3,
   31,73,3e,42,cd,1e
60 DATA bb,28,18,3e,42,
   cd,1e,bb,20,f9,3e
70 DATA 12,cd,1e,bb,20,
   0a,3e,1c,cd,1e,bb
80 DATA 28,f2,cd,d4,78,
   3a,89,8a,c9
90 MODE 1:OPENOUT"w":
   MEMORY &500
100 y=0:FOR x=&BE00
   TO &BE55
110 READ a$
112 a=VAL("&"+a$)
120 POKE x,a:y=y+a:NEXT
130 IF y<>&227D THEN PRINT
   "Data error!":END
140 LOAD"lightforce"
150 POKE &642,&C3
160 POKE &643,&1A
170 POKE &644,&BE
180 CALL &5DC
```

ADVENTURE



Outside the casino in *Worm in Paradise*, the one-armed bandit beckons you in

Welcome to 1987 – any year that starts off with no fewer than six full, unexpilgated pages of copy from the Cowled Crusader can't be all THAT bad! Especially not when you get the lowdown on Silicon Dreams, go hunting for Apache Gold, fall through the ice in Winter Wonderland and gasp with horror as the Pilg sinks his teeth into Dracula!

And if that's not enough for you (it won't be), there's a look back at 1986, in which the Pilg speaks his mind without restraint, and a look forward to the rest of this new year and the masterpieces it might offer us. So put away that pipe, Bilbo, and read on...

Silicon Dreams

Rainbird, £14.95 on 3 cassettes, £19.95 disk

OK, my friends, here's your starter for ten:

What offers you 'over 600 illustrations, over 13 million locations, a huge 1800-word vocabulary, ultra-fast response times, a new language interpreter, multi-command sentences, type-ahead and multitasking'?

Answer: The latest press release from Rainbird Software.

Yessir, this press release, in which Rainbird publicity merchants discuss their latest Level 9 blockbuster, *Silicon Dreams*, is so fraught with fact, so packed with detail, that it could almost be an adventure in itself. Is this trilogy really that stupendous? Let's examine the record...

1. 'Over 600 illustrations'

Yup, 'tis true, fellow Pilgs. The three games tally well over the 600 mark altogether. However the Pilg's feelings about Level 9 graphics are well known – I really don't think they're terribly good. Level 9 argues that without them its games wouldn't get a look-in in the British market which has been dominated by piccies ever since the Hobbit. There's a grain of truth in this, but Infocom doesn't seem to have much trouble. Surely the answer is to polish up your adventure programming techniques rather than rely on second-rate graphics to sell a game.

However, the pics are there, so no use moaning. Even *Snowball*, originally a true Level 9 text-only classic, has been given the dubious blessing of graphic detail. Ah, well, *plus ca change* – but it's not the same, in my opinion.

2. 'Over 13 million locations'

OK, you guessed it. What this really means is 'over 13 million places to go'. And in case you're confused (you will be), there's a lot of difference between a place to go and a location. A location is a unique place with a unique description that has a character all of its own – be it a broom cupboard or the Casino in *Worm in Paradise*.

So what's a 'place to go'? Well, in *Worm in Paradise* the luckless player must cope with the Eden transport system, which offers literally millions of destinations. Each of these destinations is colour-coded, but they don't offer you anything particularly different to all the others and certainly can't be considered as locations. The best guide to locations in this case is the number of graphics – 'over 600' – since there's a piccy for every place.

3. 'Huge 1800-word vocabulary'

Yes, we'll let them have that one, though I'm tempted to think that a large number of words included in this aren't going to help much with actually playing the game. If anyone who's cracked all three games could count the actual number of words needed to finish the game, I'd reckon that it would be under 200. The remainder will either get you some form of 'That's just scenery' message, or be otherwise unproductive. Still, this is standard practice with adventures, so I'm not complaining.

4. 'Ultra-fast response times.'

I didn't actually notice these while playing. I suppose that's because they were so quick.

5. 'New language interpreter'

More about this below.

6. 'Multi-command sentences'

I should think so too. This is 1987, not 1066. Even *GAC* gives you multi-command sentences.

7. 'Type-ahead and multi-tasking'.

If they hadn't bothered with the graphics, we wouldn't need the multi-tasking, which enables you to input text while the picture is drawing. Really, to call this multi-tasking (on an 8-bit machine like the Amstrad) is a bit much – all it does is make the computer first draw a bit of picture then check to see if you've typed anything, then draw another bit of picture. In other words, dare I say it, the program is running in some ways even slower than it would otherwise (just watch those piccies struggle onto the screen). Multi-tasking-schmasking, Level 9!

No, fellow Pilgs, what's really important about this collection are the following points: first, you get all three games in one wallop, which at the price is a good deal if you haven't got any of them.

Second, you get RAM RESTORE, RAM SAVE and OOPS (which enables you go back one move) – at least you do on the 6128 – I wasn't able to check up on the 464 version.

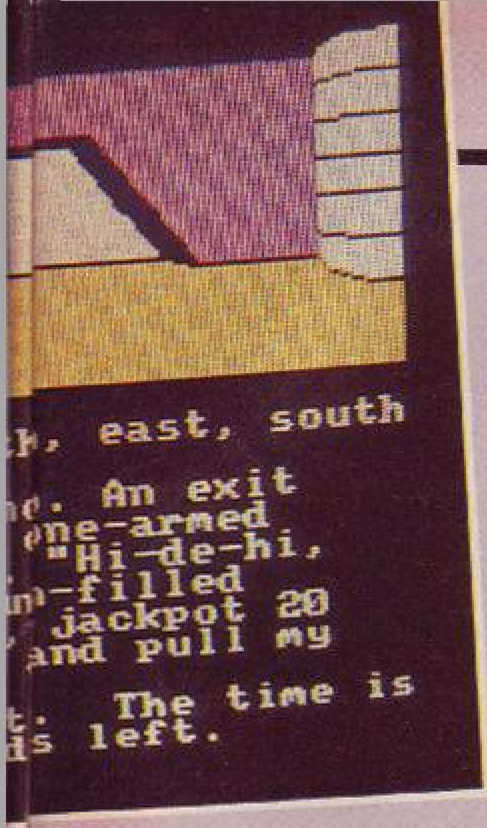
Thirdly, you get some enhanced location descriptions. Level 9 has tarted up all three games somewhat, though on playing them I didn't really think that this had made any real improvement. The games were quite good enough as they were, epecially *Snowball*.

More to the point, here is what you *don't* get. All those high-sounding features and reprogramming simply disguise the fact that these adventures are already beginning to look long in the tooth. They are programmed according to yesterday's rules. The 'new language interpreter' simply does things like say 'That's just scenery' if you ask about an otherwise irrelevant object that's just been printed in a location description. It *still* can't handle inputs involving interaction with other characters, like KIM KIMBERLEY, WHERE ARE WE?

And that has to be the way forward with adventures. We Pilgs have had years collecting treasure and battling with Orcs – now we'd like to do some good ol' interacting on the human-to-human level.

This package is a triumph of reduced-cost re-packaging. It's great value and I fully recommend it on that basis. However, if I were Level 9, I wouldn't be releasing more than one new title in 1987. I'd be spending the rest of the time changing my programming tactics, introducing interactive characters, taking advantage of the increased storage space on disks, and either abandoning or polishing up my graphics.

Otherwise 1988 will be the year Level 9 goes under...



The three games ...

Silicon Dreams is a trilogy of games concerning man's efforts to colonise the planet Eden. They all feature robots, hi-tech gadgetery, and a certain amount of Level 9 philosophising about matters political and ecological. Each game has a unique character, from *Snowball* giving one of the best-conceived 'I'm in a space-ship' scenarios ever, to *Return to Eden*'s extraordinary wildlife, including a kleptomaniac parrot and some very odd plants.

● The game that thrilled a thousand journalists when it was first released, *Snowball* was so popular that it was even serialised in a major (but now defunct) weekly publication. As Kim Kimberley (female) you awake on board the giant spaceship Snowball to find that the voyage to Eden, prospective new home for humanity, is going badly wrong. You have to set things right.

Snowball is a DIFFICULT game. First you have to take careful note of the colour-coded locations, and secondly the actual shape of the ship itself makes mapping difficult. And some of the puzzles are fiendish. However, it's brilliantly designed and remains one of the milestones in Level 9's history as Britain's best adventure house.

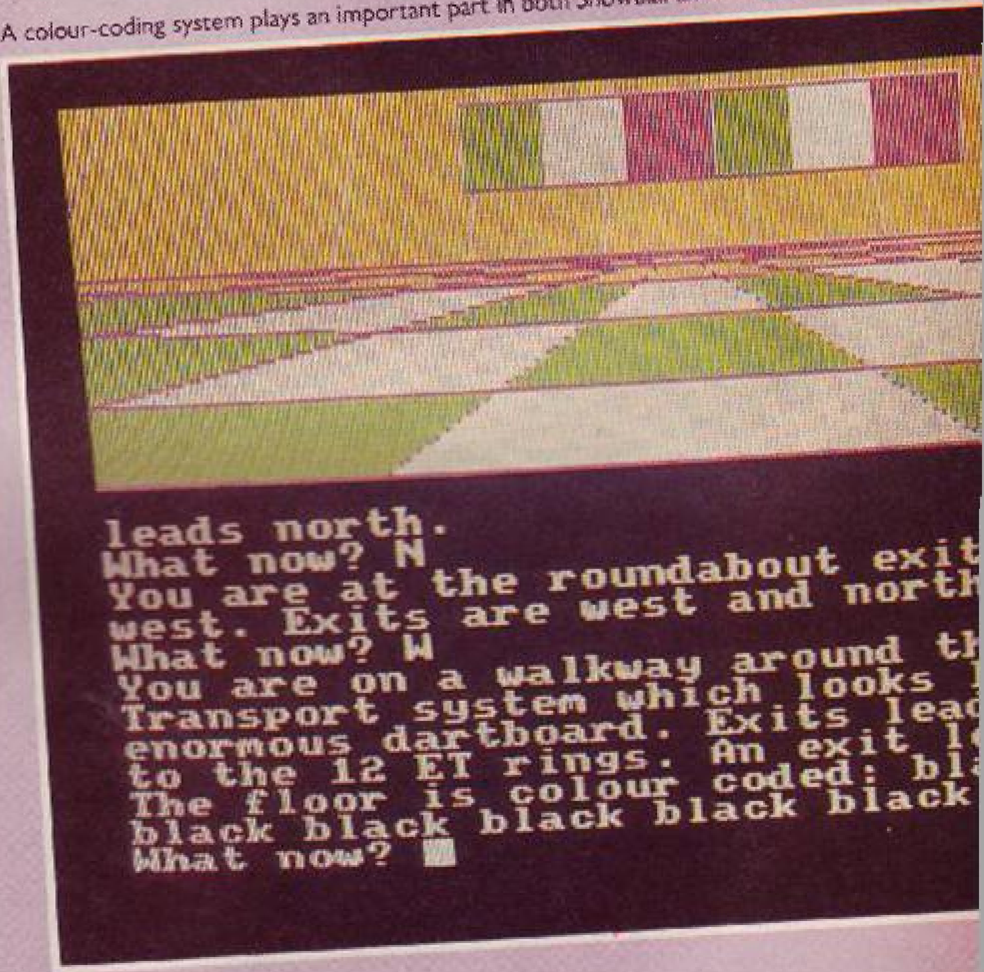
● *Return to Eden* has you struggling through the jungle to reach the city of Enoch, prepared in advance for the human colonists by robot constructors. Unfortunately the defence robots in the city have got the idea that the Snowball spaceship is an invader rather than the home of their new colonists, so good ol' Kim must leap into action once more and stop them destroying it.

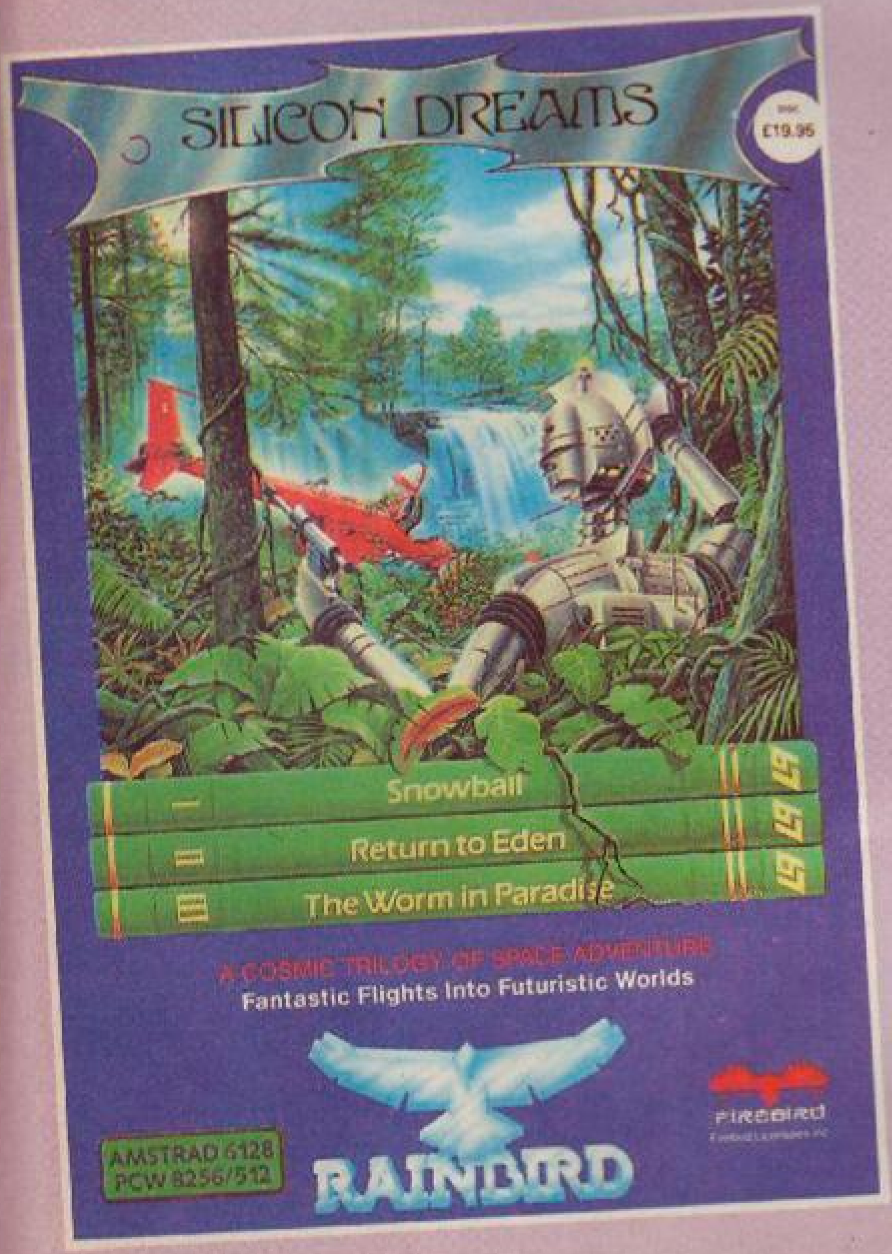
The game has some very enjoyable scenes – especially in the Eden jungle. It also has a rather tricky beginning, in which you have been sentenced to death in error by your fellow colonists and must escape destruction. 'Twill take most people quite some time to work this one out...

● *Worm in Paradise* is the most recent offering of the three. It's also the game where (to start with, at any rate) the reprogramming is least evident. The action takes place 100 years after the death of Kim Kimberley when you awake from an artifically induced dream to find out that you've forgotten who you are.

From being an out-of-work drifter you must progress first to employment, and then to membership of the ruling classes. After that, whether or not you do anything to change the rather dismal life on Eden is up to you...

A colour-coding system plays an important part in both *Snowball* and *Worm in Paradise*





Apache Gold

Incentive, £7.95 cass

This is one of a new range of games brought out by Incentive, all of which have been created by the *Graphic Adventure Creator*. They have all been awarded the Medallion Adventure Award, which means that Incentive reckons they're pick of the pops. How do they rate?

Well, so-so. *Apache Gold* is quite good fun – you toddle around the country in your faithful wagon, hobnob with the Spirit in the Sky, pinch things from Indian wigwams, and even TALK to some crusty ol' frontiersmen. There's a good sense of humour throughout the game that won't have you in fits of laughter but keeps gameplay light'n'easy. And the graphics are in some places excellent. Certainly a slight bit better than Level 9's.

The weaknesses of the game are really the weaknesses of *GAC*. The parser doesn't tell you which word it's having trouble with, so entering EXAMINE QEWRT gets you the answer 'You see nothing special'. Maybe there ain't nothing special about a qewrt, but if I enter EXAMINE WATER FALL, for example, and I'm told there's nothing special about it, I'd be mite bit miffed if I later found

out that that's because I should have typed EXAMINE WATERFALL.

In other cases there's simply been some carelessness in trapping inputs. At one point, you're hanging from a branch above some rapids. Entering JUMP INTO RAPIDS gets you the response WELL OK



Winter Wonderland

Incentive, £7.95 cassette

Not content with hunting for Apache gold, Incentive is also busy investigating lost civilisations amid the snowfields of the frozen mountain ranges of Tibet. On a mission to check out the evidence for the aforesaid civilisation you come a-cropper in your plane and have to strike out on your own across some very inhospitable territory.

Winter Wonderland features the usual *GAC* format, though I didn't think the graphics were quite as good as *Apache Gold*. Perhaps that's because it's rather more difficult to draw convincing snowscapes than it is to draw wigwams. The puzzles in the first part of the game aren't that tricky either – once you've learnt to avoid thin ice and mastered the use of a flare pistol.

There are the normal parsing disappointments here. Despite *GAC*'s ability to cope with complex inputs the game is only as good as the programmer and, for example, the input WEAR SNOW SHOES



gets you the response JUST IGNORE IT simply because the program was expecting WEAR SNOWSHOES. Ah well...

Having found your way out of the snowfields and the neighbouring mountains you stumble across a Shangri-La-type city complete with hotel and receptionist ('We've been expecting you...'). From there on the game takes on a rather cosier aspect, but the puzzles make up for this by getting somewhat tougher.

Not bad, but then you are paying £7.50 for it and I can't help feeling that this game – and *Apache Gold* – shouldn't have been released at a considerably reduced price. *GAC* is a great utility and Incentive may justifiably regard it as a license to print money as well as a program to produce games, but in this case I don't think it's going to pay off.

Dracula

CRL, £7.95 cassette

This three-part 'stunning masterpiece of gothic terror' comes to you courtesy of Rod Pike – who was responsible for an earlier CRL title, *The Pilgrim*. The big deal here is that (heaven knows how) CRL has managed to get the British Board of Film Censors to slap a '15' certificate on the game – which means that anyone under 15 can't buy it.

Frankly, my immediate response here is that all the '15' certificate means is that anyone under 15 is going to end up saving money for better things. If, however, you're over 15 and able to waste £8, here's what you get...

The game comes on two cassettes and is split into three parts – called The First Night, Arrival, and The Hunt. The storyline as a whole follows Bram Stoker's original book fairly closely – a British solicitor is summoned to Castle Dracula to arrange for the transport of some soil from there to the UK, where a newly purchased house awaits it. On the way he stops at an inn (The First Night) where he has some nasty dreams before making the journey to the castle – from which he must later escape (The Arrival).

Later Drac arrives in Blighty and gets biting, with the usual macabre side effects, until the forces of Good prevail... which all takes place in 'The Hunt'.

The text descriptions in the game are long and vivid, though there are very few locations – part one, for example, has only six! Occasional nasty pics flash up on the screen, which are meant to have anyone under 15 screaming with terror. They're not really that gruesome – and even less so when seen on a green screen! Nor are there very many of them – I counted about ten in all and although I may not have seen them all I doubt if there are many more.

The text and the pics, however, are okay as far as they go – if a little limited. But the rest of the game is pretty diabolical – and I mean diabolically bad, not diabolically evil!

First, the parser. This can cope with only two words and even then refuses to do basic things like tell you which word it doesn't understand. Instead it's back to the prehistoric 'You can't do that' and 'I don't understand' responses when the program doesn't get what it wants.

This unhelpful attitude is sometimes misleading. For example, if you enter PUT KEY ROUND NECK, the program answers I HAVE DONE THAT when in fact all it has done is drop the key (PUT being taken as synonymous with DROP, and only two words scanned). At other times it's just annoying. If you have a key to a door, you expect to be able to open it, even if it's closed and locked. However, *Dracula* is one of those old-style programs that tries to make a big puzzle out of opening doors, so first you have to UNLOCK DOOR, then you have to OPEN DOOR, and then go through it. After a while this sort of thing gets rather dull – though to be fair on *Dracula*, a number of other programs still insist on this tedious process.

Other examples of parsing ineptitude are understanding the input STOP COACH as meaning QUIT, or saying I DO NOT HAVE A SOURCE OF IGNITION when asked to light a lamp and carrying a match. The answer in the latter case is that you have to STRIKE MATCH first, but I don't think the program was being very clever there.

Nor is it clever when right at the beginning you are confronted by an angry coachman. Your obvious ploy is to pay him for the journey, but a quick INVENTORY reveals that you are carrying nothing of interest. However, you must presumably have money, because typing PAY COACHMAN sends him happily on his way – and money, I would suggest, is of interest if it is used to solve a puzzle (albeit a



weak one).

The text descriptions in this game are sometimes very good – scary even, if you're of a nervous disposition. And some of the pics (full screen size) are good too. But as an adventure game produced at the end of 1986 it is frankly appalling. I remember playing games in 1983 that were better programmed than this and I am totally baffled at CRL's decision to market it. No wonder people wonder what adventuring's all about if they get landed with stuff like this – a fervent sign of the cross should be made at anyone trying to flog you a copy.



	Silicon Dreams	Apache Gold	Winter Wonderland	Dracula
Atmosphere	85%	70%	68%	85%
Interaction	82%	55%	55%	45%
Challenge	89%	56%	55%	50%
AA-Rating	88%	58%	55%	48%

Lords and Ladies of Adventure

Once more the roll-call of the brave and battle-weary is printed on these hallowed pages. Remember that should you fall upon the path, one of the following Lords and Ladies will be prepared to answer your call for help ... providing you send a stamped addressed envelope and forbear from phoning at anti-social hours!

Unlike other magazines, the Pilg ensures that each month the list of Lords and Ladies is completely revised. If you've appeared on the list before and wish to reappear then you must reapply – and of course you should include an update of any games you've completed in the meantime.

Just occasionally, the Pilg receives complaints about some of the Lords and Ladies who have failed in their duties. I should stress that this *very* rarely happens, but please make sure that you don't offer help on a game which you haven't properly completed yourself. That will ensure that only truly deserving heroes and heroines find their way into this column, and that any cry for help will be authoritatively answered.

Castle Blackstar, Terrormolinos, Forest at the Worlds End
Derek Roberts, 40 Allen Grove, Stokesley, Middlesbrough, Cleveland, TS9 5DB

Terrormolinos, Urban Upstart, Red Moon, Gremlins, Hobbit, Marsport, Dun Darach
Lee Anthony, PO Box 424, Althorne, Chelmsford, Essex, CM3 6UR

Twin Kingdom Valley, Hobbit, Heroes of Karn, Very Big Cave Adventure, Lords of Time, Castle of Terror, Collossal Caves, Hulk, Sorcerer of Claymorgue Castle, Bored of the Rings, Quest of the Holy Grail, Magicians Ball, Snowball, Return to Eden, Worm in Paradise, Emerald Isle, Red Moon, Price of Magik, Seabase Delta, Mindshadow, Ten Little Indians, Circus, Waxworks, Perseus and Andromeda, Escape from Pulsar 7, Gremlins, Robin of Sherwood, Secret of St Brides, Fourth Protocol, Pirate Adventure
Phil Symonds, 29 Goliath Close, Roundshaw, Wallington, Surrey, SM6 9HN

Message from Andromeda
Stuart Whyte, 53 Ridgeway Road, Timperley, Altrincham, Cheshire, WA15 7HL

All Level 9 adventures, Brawn Free, Classic Adventure, Forest at the Worlds End, Jewels of Babylon, Mindshadow, Never Ending Story, Oor, Smugglers Cove, The Boggit, Trial of Arnold Blackwood, Castle Blackstar, Dun Darach, Heroes of Karn, Message from Andromeda, Mordons Quest, Project Volcano, Seas of Blood, Souls of Darkon, The Hobbit, Warlord
Joan Pancott, 78 Radipole Lane, Weymouth, Dorset, DT4 9RS. Tel: (0305) 78 4155

Mindshadow, Never Ending Story, Espionage Island, The Hobbit, Price of Magik, Message from Andromeda, Heroes of Karn, Return to Eden
Rod Dunlop, 43 Sutherland Avenue, Pollokshields, Glasgow, G41 4ET

Pilgrim's postbag

Christmas has been and gone; 1987 stretches ahead. If it's anything like 1986 then **Joan Pancott** of Weymouth is in for a busy time. Joan was one of the first Ladies of Adventure and writes in with some astonishing statistics:

"Earlier this month I celebrated my first anniversary as a 'Lady of Adventure' and during the year I had 25 letters and 745 phone calls. The ones from furthest away were a letter from Saudi Arabia and two phone calls from Australia! I am not far into my second year, but I have already had 19 calls. No doubt about it, people do like a number they can ring. A few months ago you asked if we Lords and Ladies were doing our job properly – all I can say is that I am doing my best!"

Well, Joan, I'm sure no one is going to accuse you of not doing your job – 745 calls! Just goes to show how one can make friends round the world once one has aspired to the glorious title of Lady (or Lord) of Adventure.

Danny Clegg was one of a number of people writing in about *Leather Goddesses of Phobos*. Without exception, everyone wanted to know exactly what it was the Cowled Crusader did to the female gorilla. Shame on you! The Pilg never betrays intimate secrets about his friends – especially not his close ones.

Danny also thought my review of *Aftershock* a bit tough. Hmmm... I could have been tougher, Danny, but don't forget that the reviews I write are my own personal opinions and I've seen some very good games in my time, which tends to make me fussy. After all, the money required for some of these adventures is no laughing matter. I personally wouldn't fork out eight quid on something unless I thought it was going to be a darn slight better than, for example, the four paperbacks I could otherwise buy for the money.

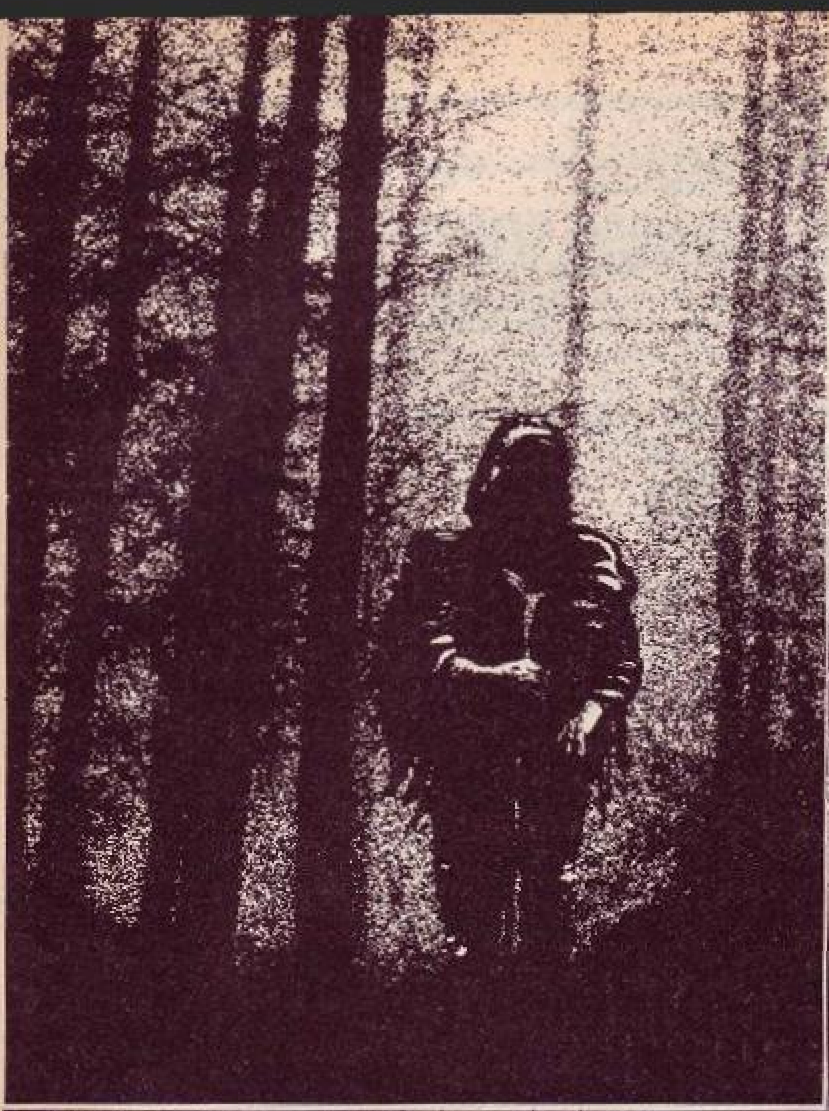
Finally, **Paul Berrecloth** writes in about *Eye-Spy* from Americana:

"I was just wondering if you could do a chart for the Bottom Ten Software! I would like to be the first to vote. In my opinion (this game) is awful. I don't claim to be very good at adventures because – in fact – I'm not. But this took practically no time at all. The puzzles were easy to the point of being obvious. The only good thing I can say about it is that the graphics were OK and quickly drawn.

"Finally, if I may be allowed to grumble, why don't they do compilation tapes of adventures? The only one I've seen was *10 Computer Hits.*"

Hmmm... Good point, Paul. On the other hand we have had *Silicon Dreams* and *Jewels of Darkness* from Level 9/Rainbird – but how about a compilation tape or disk from Interceptor? Could be a winner for 1987.


ARCADE SCORCHERS
TERRA CRESTA
GOLDEN
COIN-OP
Hot Shot
SPECTRUM
£7.95
COMMODORE 64
£8.95
AMSTRAD
LEGEND OF KAGE.
Imagine
..the name of the game



Programming with the Pilg...

In this first part of our series on programming your own games, we take a quick look inside an adventure program to see what's going on. Don't worry if you're not an experienced hacker – we'll start off very gently... and if you're a dab hand with an assembler, have patience! Things will hot up as we go along...

The Nitty Gritty...

The best way to understand how an adventure program works is first to look at what's going on screen while we're actually playing it. The first thing you'll notice in any adventure, apart from the graphics (if there are any), is the location descriptions and the *prompt* – the 'What now?' or 'Tell me what to do' message which asks you to enter something.

The next thing you'll notice crops up as soon as you start entering things. In some old games, entry is limited to a certain number of words, and in any adventure game there are going to be words or combinations of words that the program doesn't understand. In these cases the computer tells the player if it doesn't understand his or her entry. If it does 'understand', it takes some action, prints a message, and then displays the prompt again. This process of input and output continues throughout the game, so let's take a closer look at what's going on.

Basically, an adventure program consists of a number of discrete components or program 'modules', each taking care of a particular task. We'll look at these tasks in a moment. Associated with these modules are the *data tables*, blocks of data that hold information required by the program. The principal data tables are likely to be as follows:

1. The vocabulary table.
This holds all the words understood by the program and will be subdivided into verbs, nouns, objects, adjectives, adverbs and so on.

2. The locations table.
This holds all the location descriptions.

3. The descriptions table.
This holds descriptions of various characters and/or objects.

4. The messages table.
Here are stored the different error and other system messages, such as `I don't understand the word ...` and so on.

There may be other tables, such as a table for character data, for example, but these will do for the moment.

The most important thing about these data tables is not so much what they contain, but *how* they contain it – and it is at this point that programming ceases to be simply a matter of chucking in data and writing a few routines. In an adventure game in particular the *structure* of the data – the manner in which it is stored and referenced – is of prime importance.

We'll be looking at data structures in detail later. In fact, in some senses, this whole series will be about them since the actual routines to drive the program are a doddle to write. Getting one's data structures right, ducky, is getting 90% towards an efficient game.

For example, in our vocabulary table we don't just need to enter the word `KNIFE` so that the program can recognise it – we also need to enter information *about* the knife. Similarly, in the locations table we need to store info about the geographical relationships between the different places as well as some vivid lines of text. We'll start looking at this next month.

Meanwhile, the way these modules and data tables are linked together may be represented diagramatically. Figure 1 shows a schematic block/flow diagram of a typical adventure program. The user interface contains the input routines and the display routines, which channel information between computer and player. Inputs are passed to the *parser*, which scans the words entered by the player, letter by letter, and checks them against the vocabulary table to see if it recognises them.

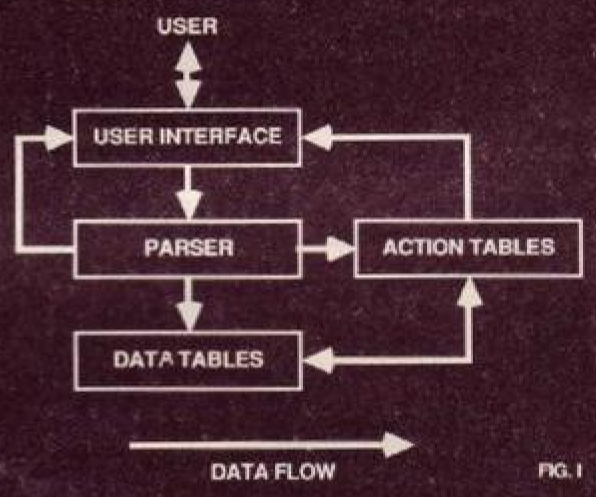


FIG. I

Once the parser has made some sense of the input (or rejected it, in which case we start again), it passes data to the action table, a block of subroutines (such as 'give' or 'drop') which refer to data in the data tables, perhaps amend it (mark an object as 'carried', for example), and then report back to the player via the user interface. Then we start all over again.

When we actually come to write our game, we'll adopt a strictly modular approach. This means that we'll write each section of the program separately so that we can test it independently to make sure it works. Some people like to call this sort of organisation *structured programming* – but for the most part the underlying principle is simply common-sense.

Next month we'll plan out our game and discuss data structures a little more – including the first look at *decision trees* – a method of taking many if-then decisions in a program by using only one `IF ... THEN` statement. This saves a lot of space in Basic (and can be adapted for machine-code) because home-brewed adventures tend to be choc-a-bloc with IF statements – which are slow to execute and take a lot of memory space.

Contacting the Pilg...

Don't forget that you can always drop the Pilg a line, contribute to the Clue Pot or perhaps even send us a Clue Cauldron with a complete solution to a single game and tips to go with it. The Cowled Crusader is always keen to hear your views on all aspects of fantasy, adventuring, and Middle Earth mayhem. And, of course, any comments about this month's column (in particular the Pilg's slightly outspoken views about 1986) are most welcome.

Write to me at *Amstrad Action*, or address me over the wires at my BT Gold address, **83: JNL251**.

QUAL-SOFT **THOUGHTWARE** **Sports simulations**

ADJUDGED JOINT NUMBER ONE SOCCER SIMULATION FOR ALL HOME COMPUTERS

The June and July issues of COMPUTER GAMER magazine reviewed 16 soccer simulations, including Ocean's MATCHDAY and INTERNATIONAL MATCHDAY (128k SP), Addictive's FOOTBALL MANAGER, Artic's WORLD CUP and WORLD CUP 2, US Gold's WORLD CUP CARNIVAL, Virgin's FA CUP, etc etc. MEXICO '86 was given a NOVA overall rating and 5 "planets" from 5 for Value for Money. Only one other game could equal this, Commodore's classic INTERNATIONAL SOCCER.

ARE YOU STILL PLAYING THE SECOND RATERS?

TAPE 1 QUALIFIERS

MEXICO '86

TAPE 2 FINALS

A WORLD CUP MANAGEMENT SIMULATION

On June 22nd 1986, England's bid to become World Champions for the next 4 years came to an end in the Azteca stadium, Mexico City. How well did Bobby Robson do? Can YOU outperform him? MEXICO '86 gives YOU charge of the England team 2 years before the start of the Mexico finals. You must experiment with a demoralised squad who failed to qualify for the European Nations' cup, drafting in players as you see fit, and nurse the team through the Qualifying stages of the World Cup. If you qualify, you must choose your squad for Mexico, play through Phase 1, the groups of four, into the last 16. Can you now take England two stages further than Bobby Robson and then win the big one? It takes a thorough understanding of International football to win in MEXICO '86.

TAPE 1 (Qualifiers)

- ★ Current squad of 16 players + 20 user defined players.
- ★ ANY team formation you choose. 2 from 5 substitutes.
- ★ In match tactics: any no. of individual player adjustments.
- ★ Your qualification group: full results and table.

TAPE 2 (Finals)

- ★ Choose a 20 man squad to take to the finals.
- ★ Group of 4 prelims. 16 to final knockout comp.
- ★ Extra Time, PENALTY SHOOT-OUTS, where relevant.
- ★ Formation and strength information on opposition.

"ENGLANDS GAMES: FULL PITCH, 22 MAN, 3D GRAPHICS & SOUND EFFECTS."

QUAL-SOFT comments: With 5 levels of play, 12 depths of sophistication and "fun" graphics, this game can be enjoyed by an 8 year old youngster as a "fun" game, and by the most sophisticated as a tactical/strategy challenge of the highest order.

PACKAGE: Tape 1 plus Tape 2 plus 20 Page Manual in "Video Cassette" style pack. Only **£9.95** *(57K RAM usage. Some would call this a MEGAGAME.)* YES IT WILL RUN ON YOUR 32k ELECTRON.

QUALSOFT GUARANTEE: Sent by 1ST CLASS POST on day the order with P.O., Cheque, Access payment is received. Telephone Access orders accepted.

QUAL-SOFT,
Dept. AA17,
18 Hazlemere Road,
Stevenage SG2 8RX.
Tel: 0438 721936

Please supply:
MEXICO '86
CPC 464,
664,
6128.

Name: ....
Address: ....
....
Access No. (if applicable) ....

AMSTRAD SOFTWARE UTILITIES FOR CPC 464/664/6128 COMPUTERS



Fido *Disc only £11.95*

A general file and disc organiser. If you can never find the program you want, then FIDO is your answer. Its many features will allow you to completely organise all your files/discs and manipulate them using a specially designed database. This menu-driven disc can store up to 200 discs or 2,150 programs. Full disc utility section • security password system (to protect your database) • Separate programs runner • Will search and list • Sort into alphabetical order • Printer option • Finds free space • Very Simple to use.

Odd Job *Disc/Rom £12.95/£19.95*

Still the best disc utility package.

A complete disc utility with all the programs YOU have told us you wanted all together in one amazing package. A total of 39k of disc space used.

Just look at some of the features:

•A complete directory editor with which you can examine the disc directory and easily alter the contents. • Recover erased programs. • Hide programs from the directory. • A complete sector editor to examine and/or alter the contents of files in HEX or ASCII. • Map out your disc and locate where files are on the disc. • Prevent programs from accidentally being erased. • An intelligent disc copier that can copy those damaged/non-standard sectors on a single or twin-drive system. • Format in half the time on either drive. Ideal for 5.25 inch second drives. • Transfer your little used programs/files from disc onto tape to reclaim expensive disc space. • Increase the speed of your disc drive by up to 20%. • Load and list protected BASIC programs. • All instructions are supplied on disc on a separate help menu. • Simple to use with single-key selection. • Makes full use of the disc drive. A to A, A to B, B to A, etc. • Compatible with all AMSTRAD CPC computers.

Super Sprite *Cassette/Disc £7.95/£11.95*

Create fast moving animated games easily.

An extremely powerful and versatile piece of software at a realistic price. SUPER SPRITE is a menu-driven friendly program which will offer you hours of enjoyment designing your own sprites. Included is a demo to show you the possibilities of designing and writing your own animated software. The complete instruction book gives examples of how to create and animate sprites for your own programming.

All prices include VAT and P&P. For Europe add £1 per title. For Australasia add £1.75 per title. For rest of world add £1.50 per title. INC AIRMAIL CONTRE REMBOUSEMENT + £2.50 EUROCHEQUES accepted in sterling.

PRIDE UTILITIES

WHITEHILL HOUSE, 6 UNION STREET, LUTON, BEDS.

Clue-sniffing with the Pilgrim

Here's this month's selection of tippos. Don't forget: contributions to the clue pot are always gratefully received by the Pilg, whose contact address is given elsewhere on these pages. And, of course, you can always send tips to my BT Gold mailbox, **83: JNL251.**

This month's clues come to you thanks to Joan Pancott, Peter Dupont, Danny clegg, Rod Dunlop, Christian Dowd, and of course the Cowled Crusader himself...

Warlord
From the bear go SEENE to avoid the quicksand.
Jump onto the straw to avoid injury.
THROW the meat to the wolves.

Subsunk
Grease the torpedo tube with butter.
Fill the glass before plunging the sink.

Return to Eden
(At beginning) Dig into the molehill and find the comfortable cave, where you should sleep wearing your radsuit until after the explosion.
Drop the pea and plant the egg.
Give the fish-fungus to the leviathan.
Throw the vine at the woodpile.
Use the parachute to escape from the island.
The leaf freezes the quagmire.

Robin of Sherwood
Pick up the quarterstaff and fight with Little John to break the spell.
Examine the statue outside the castle.

Emerald Isle
Give food to beggar for ID card.
Throw long rope over arm in crypt and pull it.
Drop plank to cross marsh.

Redhawk
The robbery times:
12.00 Fusor in the jewellers
13.11 Techno in the bank
13.55 Rat in the warehouse
16.17 Merlin in the art gallery

Price of Magik
Remember that the monkey is a brass one, and that the cold room is very cold!

Aftershock
Climb over the rubble.
Give buns to elephant to get ramp.
Use ramp to get over the chasm.

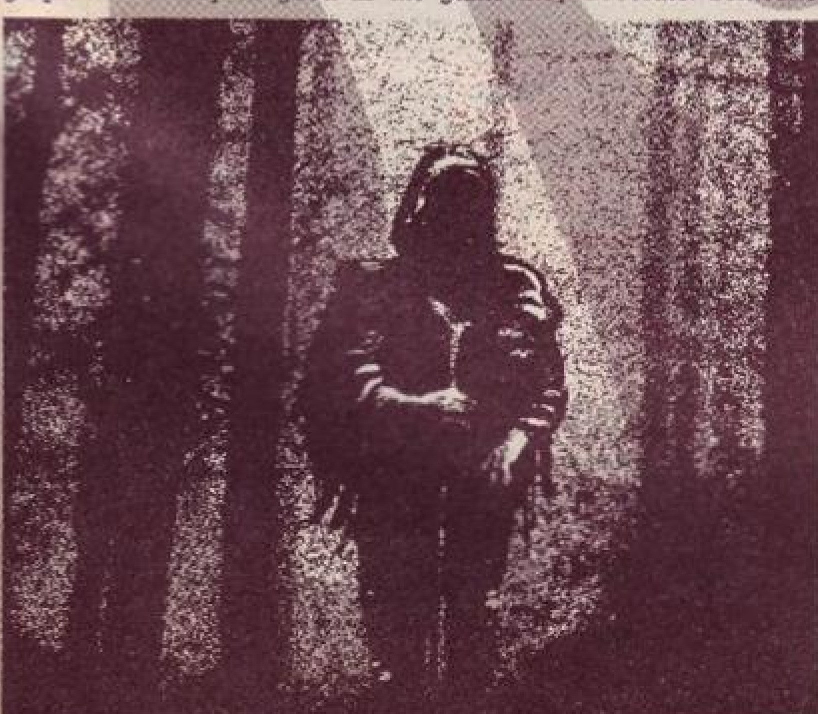
The Pilg looks back... and issues a WARNING!

What a year was 1986! *Jewels of Darkness* – one of the best-value compilations for a long time – heralded an exciting new relationship between Rainbird and Level 9. Global produced one of the most original adventures to be seen for some time, *Old Scores*. And finally – and best of all – Infocom really began to make its presence felt on the Amstrad market by releasing almost all its games on CP/M format at affordable prices.

But let us not be complacent, fellow Pilgs, for there are some teensy-weensy points that the Cowled Crusader would like to make about 1986 which may not be welcomed by many. I have two main gripes with most of the software I've seen: first, they're too expensive and second, they are *appallingly* programmed.

Now despite the fact that I'm currently showing off my limited programming expertise in this column, I don't rate myself particularly highly on the hacking stakes. But when it comes to playing games that cost ten quid but still don't give you much more in the way of programming than I was seeing three years ago then... well, 'tis a crying shame, to say the least.

Take *Aftershock* for example. £9.95 to you, my fellow Pilgs, and all you get are some attractive graphics and a parser that can accept complex commands. Now that may sound interesting, but graphics are only as good as the game they decorate. Someone



recently wrote in and suggested I'd been harsh on *Aftershock*, which he's played and enjoyed. He even enclosed a complete solution to the game...

... The solution, friends, fitted on one side of a small sheet of Basildon Bond notepaper. Is that ten quid's worth? Not in my book it ain't.

Both *Hunchback* and *Rebel Planet* also claimed a tenner for their charms. And in my mind – especially on replaying them recently – I reckon that they don't offer more than one day's dedicated playing at the most. Now look at arcade games – *Batman* for instance. The Pilg may not be hot on this area, but the esteemed Bob Wade reckons that most people would need about a week's serious playing to master it. And even then you could still get something from playing it...

But adventures are virtually dead once you've finished them. And that means they've got to be first-rate to get your cash.

There have been some good signs, though. *Subsunk* and *Spy Trek* – both coming in at under two quid – show that budget adventure software is both possible and doesn't have to be dross. *Subsunk* took me longer to finish than *Aftershock* at a fifth of the price. Okay, so the pics aren't quite that stunning, but I'm in no doubt which game I'd spend my money on.

So what do *you* think? Let's open the debate and during the coming year be really *critical* – not just for the sake of being nasty but because if we don't start getting choosy then the software houses aren't going to make the effort. And that means that in two years time there won't be any UK software houses left in business – we'll all be buying Origen games and Infocom epics.

To my mind the three most important things in an adventure are:

► Interaction – particularly with other characters. Remember the poodle in *Wishbringer*. Brilliant! Why can't some UK software houses bring a little more life into their Go North/Solve Puzzle/Get Object games?

► Atmosphere. CRL's *Dracula*, reviewed in this issue, almost saves its face with some good text descriptions. Imagine what it might have been like if the rest of the game's features had been as good.

► Parsing. It really isn't difficult to write a game that tells you which word it doesn't understand and why it's rejecting your inputs. The Pilg gives due warning that from now on any game not giving these sort of options is going to get a pretty hefty black mark. And RAMSAVE and RAMRESTORE aren't that difficult either...

So, let's hope that 1987 sees a bit of oomph from British software houses. I'm fed up with praising Infocom to the skies – we can do just as well, and win ourselves an American market in the process. Any more games that come in to the Pilg's sweaty hands looking like relics from pre-*Hobbit* days are going to have a tough time...



Master Blaster Winners

Here are the gruesome and the hilarious results of our Master Blaster competition (published in the November issue). The lucky winners of a Saisho ghettoblaster each in the two age groups – under and over 16 – are **Martin Fagan** of Dublin for his truly revolting one-eyed beast, and **Ian McLaren** of Glasgow for his sidesplitting five-a-side cartoon.

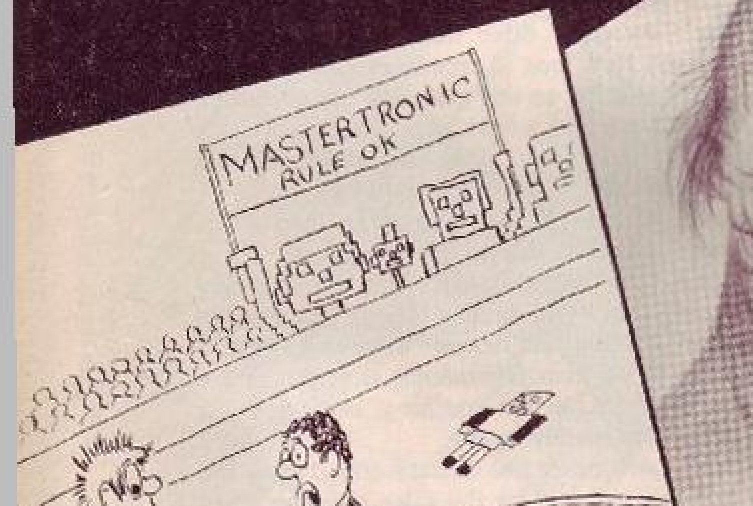
Second prizes of Sony Walkmans go to **Alex Garland** of London NW3 for his delightfully drawn cartoon strip and to **Nick Harper** for a nightmarish guitar player (would Nick please contact us).

The third-prize digital watches go to **Gareth Hector** of Largs for a real slob monster, and to **P Newman** of Weston-super-Mare for his missing-computer gag.

The ten runners-up prizes of Mastertronic T-shirts (five in each category) go to: **Jacob Williams**, Cambridge; **Paul Armstrong**, Havant; **Liaket Ali**, Leicester; **Simon Shemilt**, Swansea; **Karl Stokes**, Ossett; **Francis Agius**, Southport; **R Boissier**, France; **John Conway**, Glasgow; **Paul Robson**, Middlesbrough; **J Smith,** Southampton. Congratulations to all who entered.


2

1



3



3

SOAR AWAY ON STARGLIDER



A radio-controlled glider, copies of *Starglider* and chuck-gliders could float through your letterbox in this great giveaway

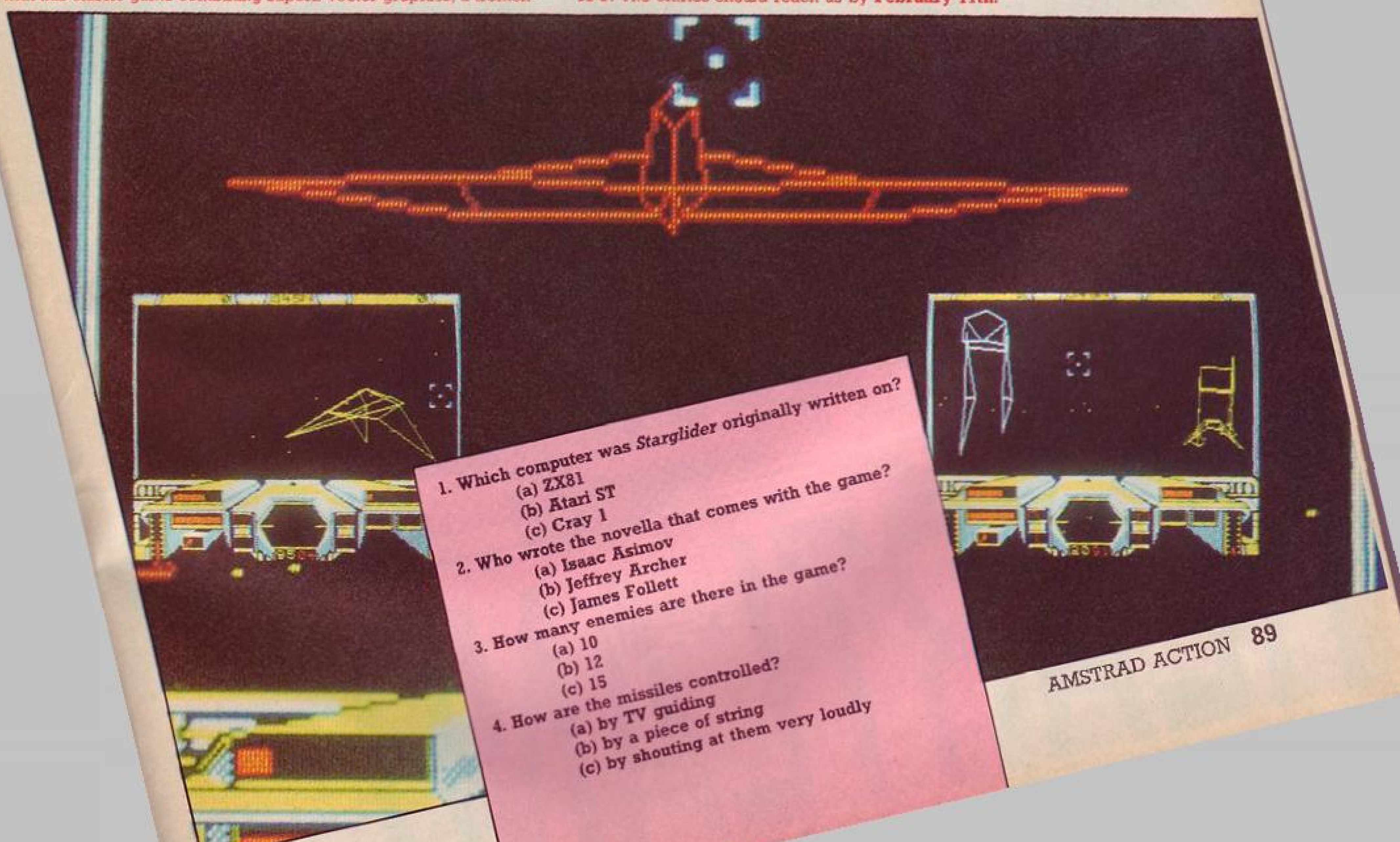
You can cruise through the heavens on a radio-controlled glider, float like a butterfly and sting like a sapphire II quadpulse laser cannon mounted on an airborne ground attack vehicle in *Starglider*, (breath – ed) or terrorise the neighbourhood with a fast and low-flying balsawood chuck-glider.

If that sentence didn't take your breath away, the prizes certainly will. The first prize is a superb Veron Vortex fibreglass glider with radio control plus a copy of Rainbird's superb Mastergame, *Starglider*. The former you can put together yourself and in the latter you can happily take lots of aliens apart with lasers and missiles.

The generosity doesn't stop there. Ten runners-up win a copy of the game. Just think of the endless hours of fun you can have with this classic game combining superb vector graphics, a tremendous challenge and great gameplay. There are also 50 third prizes of a balsawood chuck-glider which you can put together in no time at all. Armed with this fabulous flying machine you can bring down every paper plane in sight, knock over any precariously perched ornaments and crashland neatly into the washing-up bowl.

To get your hands on this floating bonanza, all you have to do is answer four simple questions about the game. (Hint: why not read the review on pages 50-51?). Just pick the letters corresponding to the four correct answers and write them on a postcard or the back of a stuck-down envelope. Don't forget to add your own name and address. (Only one entry per person.)

Once you've done that, slap a stamp on it and send it to **Starglider Comp, Amstrad Action, Somerton, Somerset, TA11 7PY.** The entries should reach us by **February 11th.**

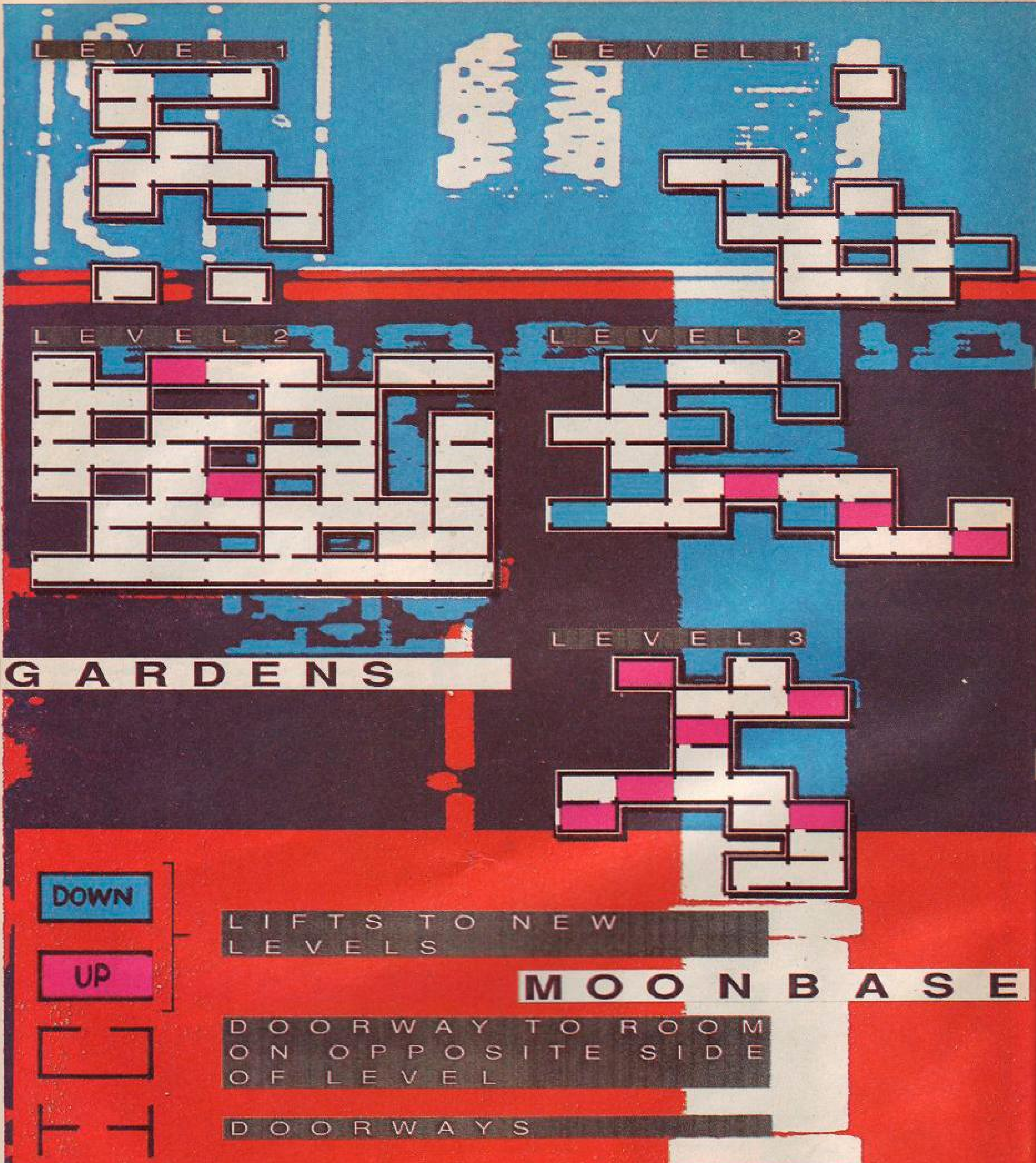


1. Which computer was *Starglider* originally written on?
- (a) ZX81
- (b) Atari ST
- (c) Cray 1

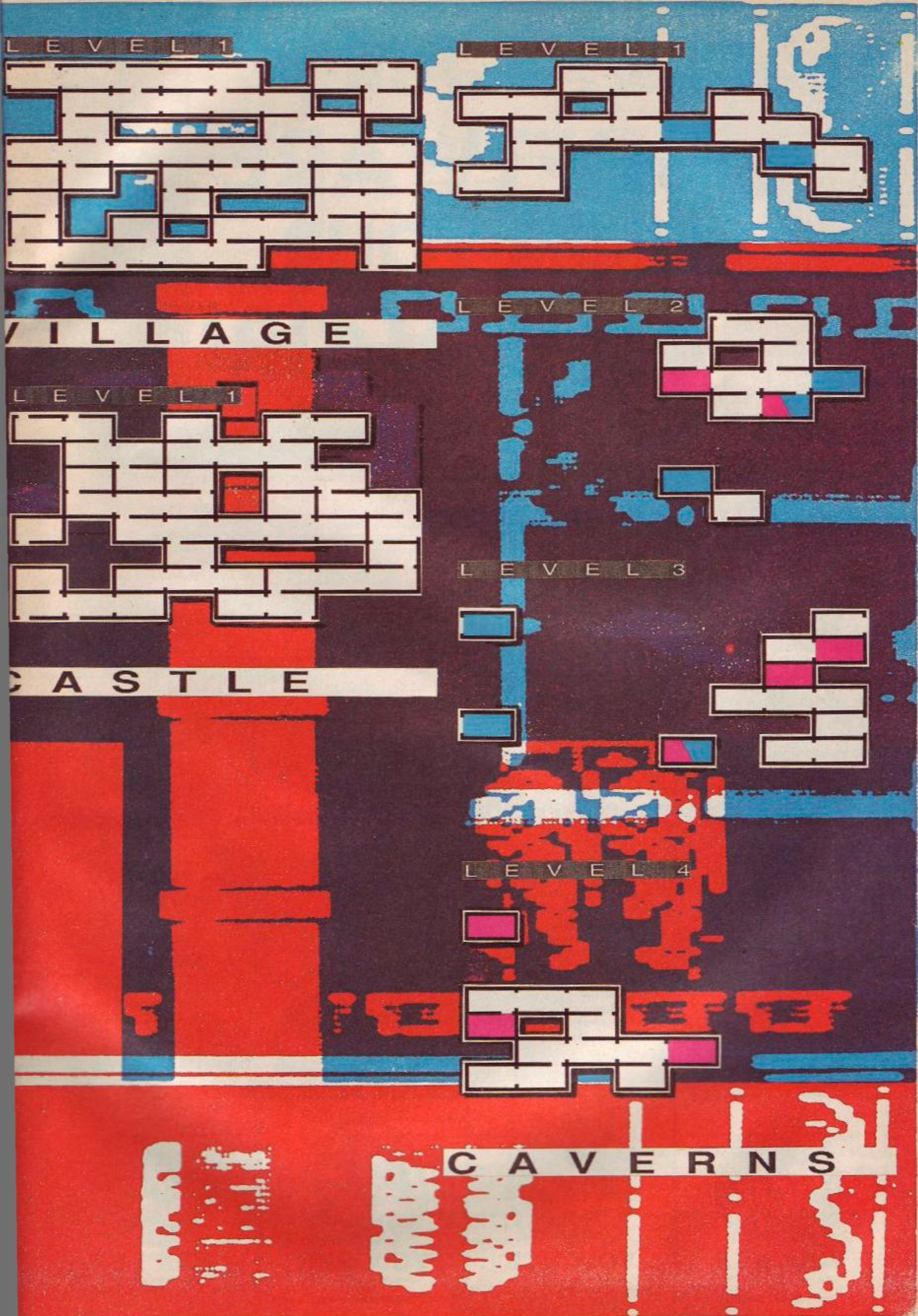
2. Who wrote the novella that comes with the game?
- (a) Isaac Asimov
- (b) Jeffrey Archer
- (c) James Follett

3. How many enemies are there in the game?
- (a) 10
- (b) 12
- (c) 15

4. How are the missiles controlled?
- (a) by TV guiding
- (b) by a piece of string
- (c) by shouting at them very loudly


LEVEL 1
LEVEL 1
LEVEL 2
LEVEL 2
LEVEL 3
GARDENS
MOONBASE
DOWN
UP
LIFTS TO NEW LEVELS
DOORWAY TO ROOM ON OPPOSITE SIDE OF LEVEL
DOORWAYS

HEARTLAND


LEVEL 1
LEVEL 1
VILLAGE
LEVEL 2
LEVEL 1
LEVEL 3
CASTLE
LEVEL 4
CAVERNS

AA MAIL ORDER

BUY YOUR SOFTWARE FROM YOUR ARMCHAIR!

Let Amstrad Action's unique mail order service do the walking.

By the time you've reached this part of the magazine, chances are you'd love to get your hands on some of the software we've reviewed. And that's just what you can do. Our mail order service allows you to order virtually ANY piece of software for the Amstrad micros reviewed in the magazine. What's more you can save yourself a good sum of money on shop prices AND qualify for great free gifts.

Hey, it's a wonderful way to buy your software!

SUPER FREE GIFTS!

Here's the great range of cassette software that you can get FREE with your order – most of these titles normally cost over £8. If your total order is over £15 you will receive ONE free title, and if it's over £30 you get TWO! Use the order form to mark your preferences and to delete any titles you already have. (Although we will supply you with your preferences if we possibly can, we cannot always guarantee this – it's best if you mark at least three preferences in case some are out of stock.)

1. KUNG FU/NUMBER 1
Two great Ocean games on one tape, as given away with the Christmas '85 issue of AA. If you missed it then, you could get it now.
2. THE COVENANT + DEMOS
A full version of the AA-Rave PSS game on tape, together with demos of four other PSS titles, and instructions for transferring *The Covenant* to disk. As featured on the cover of our May 1986 issue.
3. DEVIL'S CROWN
Probe Software, AA Rave.
4. ALIEN 8
3D Classic, Ultimate
5. HERBERT'S DUMMY RUN
Mikrogen fun. AA Rave.
6. ELECTRO FREDDY
Arcade fun.
7. SPLAT!
Amsoft entertainment.
8. WRIGGLER (Blaby)
Great version of Centipede.
9. PYJAMARAMA
First Mikrogen Wally game!
10. SPANNERMAN
Oldie goldie.
11. HUNCHBACK
Save Esmerelda on the castle.
12. MESSAGE FROM ANDROMEDA
Challenging Adventure.

AA MAIL ORDER

The double-A triple-F service

- FAST delivery
- FAT discounts
- FREE gifts



50p VOUCHER
For use with orders from £5.00-£9.99
(max. one voucher per order)

£1 VOUCHER
For use with orders from £10.00-£19.99
(max. one voucher per order)

£2 VOUCHER
For use with orders from £20.00-£49.99
(max. one voucher per order)

£5 VOUCHER
For use with orders over £50.00
(max. one voucher per order)

FREE!
with any order over £5

A C15 data cassette containing high-quality tape specially designed for computer users. It comes in a library case with blank inlay card.

FREE!
with any order over £15

Your pick of any one of the games featured in the Super-gifts box. Most would normally cost £8-10!

FREE!
with any order over £30

A blank 3" disk OR your pick of any TWO of the games featured in the Super-gifts box.

HOW ORDERS ARE DEALT WITH

Amstrad Action Mail Order is run here in Somerton by the super-efficient SUE TAYLOR, the woman who gets more mail in a day than most people get each year!

Unless your order includes programs which our suppliers cannot get hold of for some reason, Sue despatches all packages by first class mail within two or three working days of receiving the orders. Therefore, you can normally expect to receive your parcel about a week to 10 days after ordering.

If it's delayed beyond that chances are you've ordered a title which hasn't yet been released or is temporarily unavailable. In which case a phone call from you WON'T speed things up. (In fact the reverse – phone calls are very time-consuming.) If a long delay were likely we'd let you know.

PLEASE BEAR IN MIND

1. The fact that a program is reviewed in the magazine does not guarantee its availability since some software is reviewed BEFORE it has actually been released.
2. We are happy to refund your order at any time up to the despatch of the goods. But because of the possibility of copying software, no refund or exchange to an alternative piece of software can be given after they have been despatched. Software which does not load may be returned for a replacement cassette or disc containing the same software either to us or directly to the software house concerned.
3. We try to be as accurate as we can with details of price, compatibility and disk availability, but cannot accept liability for any errors that creep in.

OVERSEAS READERS WELCOME

Readers in the Republic of IRELAND can order any of these goods at the same rates as British readers provided that payment is made in pounds Sterling. If you wish to pay in Irish pounds you must add a IR3.50 surcharge IN ADDITION to allowing for the current exchange rate – that's what it costs us to pay in your cheques or postal orders.

Readers elsewhere in EUROPE must add £1 per software item to the cost of their order. Payment must be in pounds Sterling.

You can order ANY Amstrad CPC software!

ACCESS + VISA HOTLINE
If you own one of these credit cards you can place your order by telephone. Just dial 0458-74011 and ask for "Credit card orders".

Send this form plus payment to: AA Mail Order, 18 Pinewood Drive, Somerton, Somerset, TA11 6JP

MAIL ORDER FORM

Name...Telephone no. (if poss)..............................

Address...

....Post code.......................

Machine owned: ☐ CPC 464 ☐ CPC 664 ☐ CPC6128

Enter the programs you wish to order in the spaces below. Under 'PRICE' you must enter the full recommended retail price. (This side of the form is NOT to be used for any of our special offers. If you want more than four items, you should list them on a separate piece of paper.

	SOFTWARE TITLE	SOFTWARE HOUSE	DISC/CASS	PRICE
1				
2				
3				
4				
			PRE-DISCOUNT TOTAL	

Tick one of the following according to your PRE-DISCOUNT TOTAL.

☐ Under £5 ☐ £5-9.99. I enclose a 50p discount voucher. ☐ £10-14.99. I enclose a £1 discount voucher.
☐ £15-19.99. I enclose a £1 voucher and claim a free gift. ☐ £20-20.99. I enclose a £2 voucher and claim a free gift.
☐ £30-40.99. I enclose a £2 voucher and claim two gifts ☐ Over £50. I enclose a £5 voucher and claim two gifts

TOTAL PAYABLE FOR MAIL ORDER (=PRE-DISCOUNT TOTAL minus discount): £
Add this total to the amount payable on any special offers ordered on reverse side.

Now delete from this list the games you already have, and circle the ones you would particularly like as your free gift(s).
Kung Fu • Covenant • Devil's Crown • Alien 8 • Herbert's Dummy Run • Electro Freddy • Splat!
Wriggler • Pyjamarama • Spannerman • Hunchback • Message From Andromeda

Half Price!

Special offer for readers taking advantage of these pages:

ISSUE 4 - with OCEAN cassette

Only 75p if you order any other item from these two pages!

The 116-page Christmas issue of *Amstrad Action*, with *Kung Fu* and *Number One* from Ocean on a cover cassette, retailed for £1.50 and as a back issue normally costs £1.85. You can have a copy and halve the original price if you take up any of this month's Special Offers.

The cassette is arguably the best gift ever stuck to a magazine cover, and up to the standard you would pay pounds for over the counter. *Kung Fu* has superb animation and a two-player option; *Number One* is an addictive rollerball game with super-fast 3D graphics.

And the issue itself isn't bad either. with our usual reviews and news, a look inside the doors of Ocean, and plenty of maps and game-pokes. Superb value at £1.50, and it could be yours for 75p!!

Save chaos!

MAGAZINE BINDERS

Only £3.95

You asked for them and now you've got them. No more piles of Amstrad Actions cluttering up your living room carpet and getting, sob, battered to pieces in the process. Instead a superb, custom-built binder specially designed to take 12 copies of AA and preserve them in pristine condition for prosperity (and easy future reference).

These binders look every bit as good as the magazine, and include the name 'Amstrad Action' embossed in blocked Newvap Gold on the spine. Individual magazines are held in place by being slotted behind one of 12 wires

Loyal readers, don't delay. Request your binder right away!

AMAZING

Buy two and get one free!

Another incredible offer from the AA Dream Fulfillment Department. Buy any two of our all time top 20 games at their normal asking price and you can obtain a third COMPLETELY FREE! The only condition is that the recommended retail price of the free game you choose cannot be greater than that of either of the two games you buy. (You cannot, for example, buy two budget games on tape and claim a free full price game on disk! We're generous, but not insane.)

All you have to do is cast an eye down this mouth-watering list and pick out the games you fancy. Then tick two off on the order form and circle the one you want thrown in.

Remember these are the 20 titles picked by Amstrad Action reviewers as the best games ever released on the CPC machines. You could hardly hope for a better way of expanding your software library.

BATMAN
Ocean Software, £8.95 cass, £14.95 disk

BOULDERDASH
Mirrorsoft, £9.95 cass, £14.95 disk

BOUNDER
Gremlin Graphics, £8.95 cass, £13.95 disk



SPECIAL OFFER FORM

Fill in your name, address and machine type on the reverse of this form. Then place a tick next to those items you wish to order.

1. Cover cassette titles

All at just £5.95 cass, £10.95 disk!

DRUID	☐ cass	☐ disk
STARSTRIKE2	☐ cass	☐ disk
DOOMDARK	☐ cass	☐ disk
HEARTLAND	☐ cass	☐ disk
HIVE	☐ cass	☐ disk

2. Top 20 games offer

Please TICK the TWO titles you wish to buy and CIRCLE the title you wish to receive free. If the three games have different prices you must BUY the more expensive two, and have the cheapest one free.

	CASS	DISK
Batman	☐ £8.95	☐ £14.95
Boulderdash	☐ £9.95	☐ £14.95
Bounder	☐ £8.95	☐ £13.95
Doomdark R.	☐ £9.95	☐ £14.95
Druid	☐ £7.95	☐ £14.95
Elite	☐ £14.95	☐ £19.95
Get Dexter	☐ £9.95	☐ £14.95
H.O.T.Magick	☐ £9.95	☐ £14.95
H. Encounter	☐ £8.95	☐ £13.95
Knight Tyme	☐ £2.99	
Lightforce	☐ £8.95	☐ £13.95
Marsport	☐ £9.95	☐ £13.95
Revolution	☐ £9.95	☐ £14.95
Sorcery Plus		☐ £13.95
Spindizzy	☐ £9.95	☐ £14.95
Starstrike 2	☐ £9.95	☐ £14.95
Tau Ceti	☐ £9.95	☐ £14.95
Thrust	☐ £1.99	
Tomahawk	☐ £9.95	☐ £14.95
TLL	☐ £8.95	☐ £13.95

3. Maestro Sound Unit

☐ £36.95 complete

4. Magazine binders

☐ £3.95

5. Back issues

At £1.35: ☐ No.3 ☐ No.5

☐ No.9 ☐ No.10 ☐ No.11

☐ No12 ☐ No13 ☐ No.14

☐ **Issue 4 for 75p!**
(only with other orders from these pages)

TOTAL NUMBER OF ITEMS TICKED ☐

TOTAL AMOUNT PAYABLE ON SPECIAL OFFERS £

I enclose a cheque or postal order for this amout, plus the total payable for mail order on the reverse of this form. The payment is made out to FUTURE PUBLISHING LTD.

PLEASE NOTE

These offers are separate from the rest of our mail-order scheme. You cannot use the vouchers on the mail-order page to obtain further discounts and free gifts – we've already knocked off the most we can! However, if you prefer, you may order any of the items on this page at their NORMAL FULL PRICE through the ordinary mail-order scheme on the previous page. You can then use the relevant voucher and, if the price is over £15, claim a free gift. This could make sense if you are ordering other goods at the same time.

TOP 20 GAMES OFFER

DOOMDARK'S REVENGE
Beyond, £9.95 cass, £13.95 disk

DRUID
Firebird, £7.95 cass, £14.95 disk

ELITE
Firebird, £14.95 cass, £19.95 disk

GET DEXTER
PSS/Ere, £9.95 cass, £14.95 disk



HEAVY ON THE MAGICK
Gargoyle, £9.95 cass, £14.95 disk

HIGHWAY ENCOUNTER
Vortex, £8.95 cass, £13.95 disk

KNIGHT TYME
Mastertronic, £2.99 cass

LIGHTFORCE
FTL, £8.95 cass, £13.95 disk

MARSPORT
Gargoyle, £9.95 cass, £13.95 disk

REVOLUTION
Vortex, £9.95 cass, £14.95 disk

SORCERY PLUS
Amsoft/Virgin, £13.95 disk

SPINDIZZY
Electric Dreams, £9.95 cass, £14.95 disk

STARSTRIKE II
Realtime, £9.95 cass, £14.95 disk

TAU CETI
CRL, £9.95 cass, special edition £14.95 disk

THRUST
Firebird, £1.99 cass

TOMAHAWK
Digital Integration, £9.95 cass, £14.95 disk

TORNADO LOW LEVEL
Vortex, £8.95 cass, £13.95 disk

Save £3!

MAESTRO MAGIC

Stereo amplifier, speakers, headphones, only £36.95 complete

Since the AA offices took possession of a Vanguard Maestro sound system, game-playing has entered a new dimension.

No more feeble, tinny squawks from the well-meaning but sadly inadequate speaker inside poor Arnold. Instead rich, powerful, spine-tingling SOUND.

And the stereo! If you want to make a Commodore 64 owner go green with envy, stand him between the Maestro speakers during a good Amstrad game. The effect is stunning. Only Amstrads can do this!

Using the Maestro is a doddle. It just plugs into any CPC machine's earphone socket. It doesn't even need a separate power supply, since it cleverly links up to the Amstrad's own. Once it's there you just position the two powerful speakers, adjust the balance using two independent volume controls, then sit back and soak up that stereo.

And if the noise annoys, you can always use the pair of headphones supplied for private amplified listening! Or better yet you can link up to your own Hi Fi speakers and blast out the entire neighbourhood!

We think the Maestro is magic, and we're delighted to be able to offer it at £3 off the recommended retail price.

A great chance to discover what your Amstrad is really capable of...

COVER CASSETTE SOFTWARE SENSATION

The big five Telecomsoft titles at an incredible £5.95* each!

Amstrad Action's Christamas cover cassette allowed you to taste some superb software from the Telecomsoft trio of software labels: Firebird, Beyond and Odin. Now you can buy the real thing at remarkable low prices exclusive to Amstrad Action readers!

** £5.95 is the cassette price. Disk versions cost just £10.95*

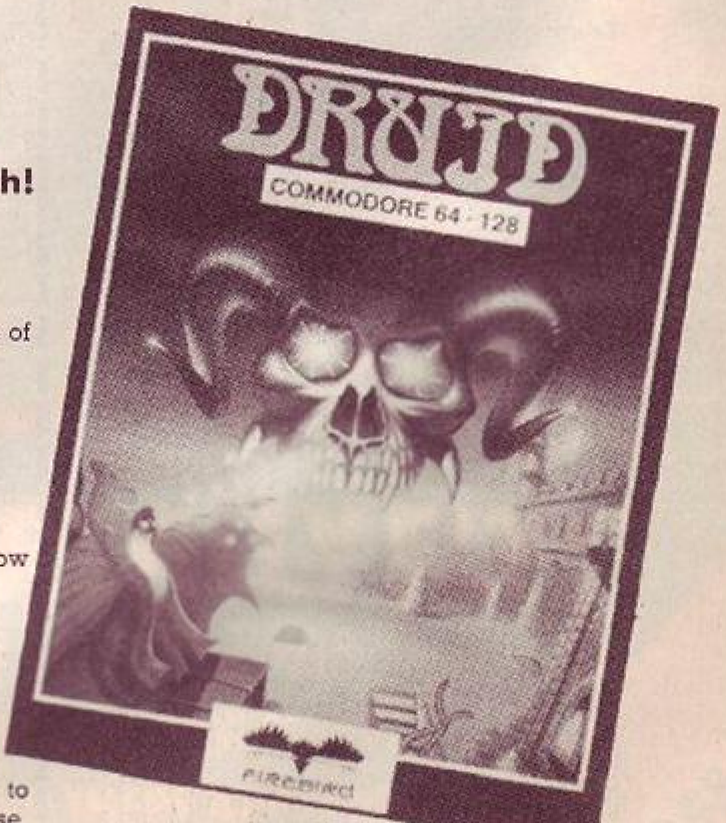
Save £2
DRUID
Only £5.95 tape, £10.95 disk!
If you think level 2 was good, you should try the rest of this classic AA Mastergame.

Save £4
STARSTRIKE 2
Only £5.95 tape, £10.95 disk!
Another AA Mastergame at little more than half price.

Save £4
DOOMDARK'S REVENGE
Only £5.95 tape, £10.95 disk!
The massive Beyond epic with thousands of views, stunning atmosphere.

Save £4
HEARTLAND
Only £5.95 tape, £10.95 disk!
You were knocked out by the Odin ad, now try the thing itself.

Save £4
HIVE
Only £5.95 tape, £10.95 disk!
This exciting title is (at time of going to press) due for an early January release. We'll send it as soon as we get it.



FREE MASTERGAME FREE BINDER

The goodies pour in when you subscribe to Amstrad Action!

It only costs £16.50 to guarantee yourself a year's regular supply of Amstrad Action, the only magazine in Britain 100% dedicated to the Amstrad CPCs.*

And to show you how much we value your company, we're offering new subscribers an amazing bargain: your choice of any one of six fabulous Mastergames on cassette or disk absolutely free! If you choose the cassette version of your game, you can also have a gorgeous, high-quality Amstrad Action binder to keep your magazines in perfect nick right through the year!

The subscription price covers all postage and packing plus the extra cover price of any 1987 special issues (there were two in 1986!). It also guards against future price rises. When you add to all that the value of the goods you're getting free, and the satisfaction of knowing you won't miss an issue in 1987, it becomes quite a tempting offer, don't you think?

Forget the PCW 8256! Forget the PC 1512! Give your CPC a treat for the New Year! Join the double-A team.

* This price is for the UK and EIRE (sterling only please). The price for other European countries is £22.50. Readers outside Europe should write to us for a quote.

Pick any one of these titles on cassette or disk! (cassette users get a binder too!)

Send this form to:
AA Subscriptions, The Old Barn, Somerton, Somerset, TA11 5AH
Offer closes February 15th, 1987

SUBSCRIPTION FORM

Yes, I want to take out a 12-month subscription to Amstrad Action and receive a free Mastergame.

Name ____________________

Address ____________________

____

____

Telephone no. ____________________

Tick the name of the FREE MASTERGAME of your choice.

☐ GAUNTLET ☐ REVOLUTION
☐ HEAVY ON THE MAGICK ☐ BOUNDER
☐ SPINDIZZY ☐ DRUID

Now tick ONE of the two options below

☐ 1. Please send me the Mastergame on *cassette* AND a free binder.
☐ 2. Please send me the Mastergame on *disc.*

Please make cheques and POs for £16.50 payable to Future Publishing Ltd. Or pay by credit card.

Access/Visa No. ____________________

Card expiry date ____________________

ACCESS + VISA HOTLINE
If you own one of these credit cards you can place your order by telephone. Just dial 0458-74011 and ask for "Credit card orders".



Gremlin Graphics addiction.
Mastergame June 86.
RRP £9.95 cass, £14.95 disk

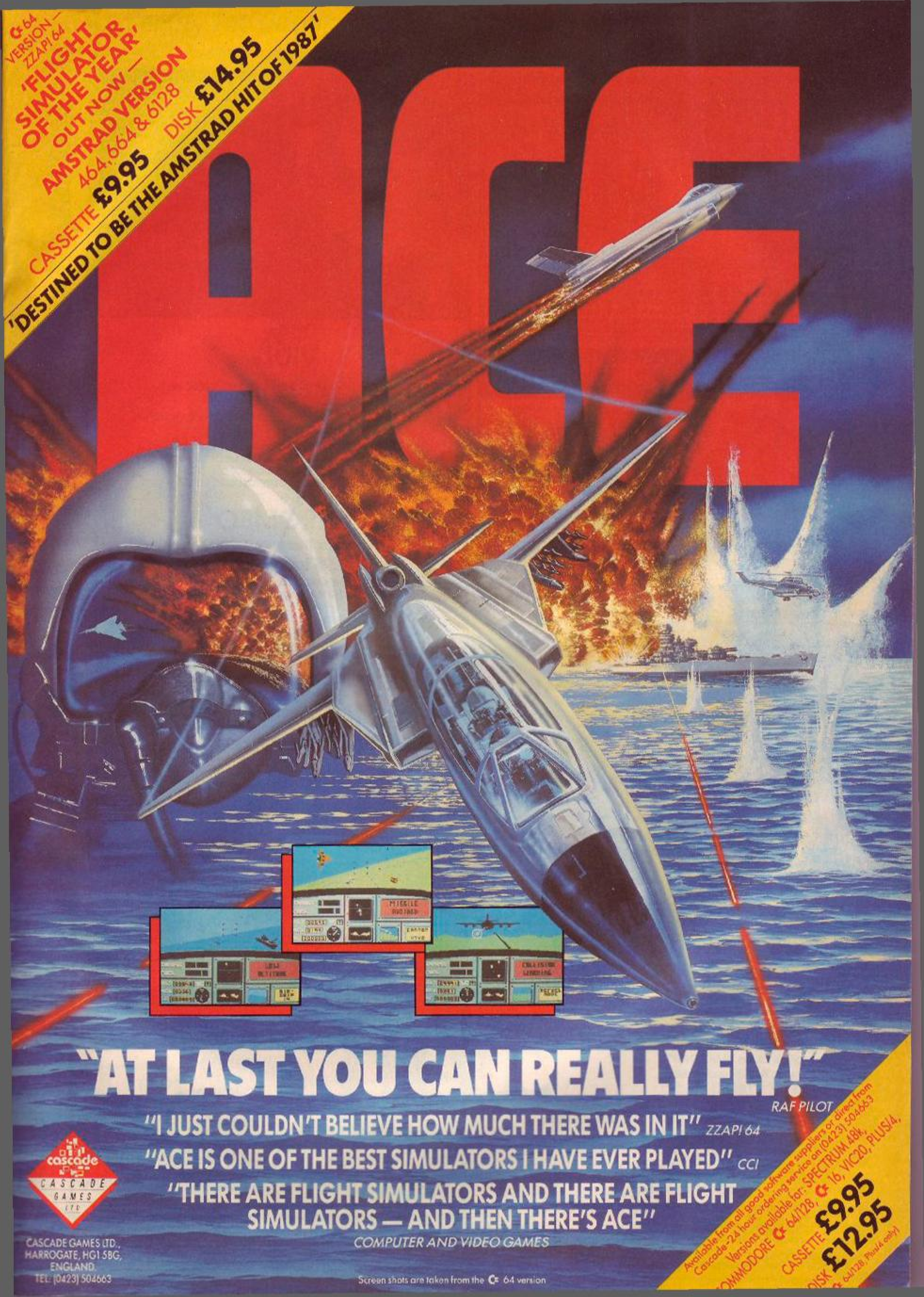
SPINDIZZY
Best AA rating ever.
Mastergame March 86.
RRP £9.95 cass, £14.95 disk

REVOLUTION
Dazzling Vortex originality.
Mastergame November 86.
RRP £9.95 cass, £14.95 disk

GAUNTLET
Pure gold from US Gold.
Mastergame Christmas 86.
RRP £9.95 cass, £14.95 disk.

DRUID
Firebird classic.
Mastergame December 86.
RRP £7.95 cass, £12.95 disk

HEAVY ON THE MAGICK
Gargoyle's greatest adventure.
Mastergame July 86.
RRP £9.95 cass, £14.95 disk


C= 64 VERSION — ZZAP! 64 'FLIGHT SIMULATOR OF THE YEAR'
OUT NOW — AMSTRAD VERSION
464, 664 & 6128
CASSETTE £9.95 DISK £14.95
'DESTINED TO BE THE AMSTRAD HIT OF 1987'
ACE
"AT LAST YOU CAN REALLY FLY!" RAF PILOT
"I JUST COULDN'T BELIEVE HOW MUCH THERE WAS IN IT" ZZAP! 64
"ACE IS ONE OF THE BEST SIMULATORS I HAVE EVER PLAYED" CCI
"THERE ARE FLIGHT SIMULATORS AND THERE ARE FLIGHT SIMULATORS — AND THEN THERE'S ACE"
COMPUTER AND VIDEO GAMES
cascade
CASCADE GAMES LTD
CASCADE GAMES LTD., HARROGATE, HG1 5BG, ENGLAND.
TEL: (0423) 504663
Screen shots are taken from the C= 64 version
Available from all good software suppliers or direct from Cascade-24 hour ordering service on (0423) 504663
Versions available for: SPECTRUM 48k, COMMODORE C= 64/128, C= 16, VIC20, PLUS/4,
CASSETTE £9.95
DISK £12.95
(C= 64/128, Plus/4 only)

SUPA SOFT DISCOUNT SOFTWARE

TOP TWENTY AMSTRAD TITLES AT DISCOUNT PRICES

THIS MONTH	LAST MONTH	TITLE	464/6128	CASS PRICE	DISK PRICE	DISK PCW 256/8512	PRICE
(1)	(1)	MINI OFFICE 2	/ /	£12.00	£14.95	N/A	
(2)	(2)	TRIVIAL PURSUIT	/ /	£10.95	£15.95	/	£16.95
(3)	(3)	SOLD A MILLION 3	/ /	£6.95	£10.00	N/A	
(4)	(4)	1942	/ /	£6.95	£10.95	N/A	
(5)	(5)	KONAMI COIN OP	/ /	£6.95	£10.00	N/A	
(6)	(6)	SCOOBY DOO	/ /	£5.95	£10.95	N/A	
(7)	(7)	ATLANTIC CHALL	/ /	£6.50	N/A	N/A	
(8)	(8)	DANDARE	/ /	£5.95	N/A	N/A	
(9)	(9)	SOLD A MILLION 2	/ /	£6.95	£10.00	N/A	
(10)	(10)	BATMAN	/ /	£6.50	£10.00	/	£10.95
(11)	(11)	GREEN BERET	/ /	£6.50	£10.00	N/A	
(12)	(12)	HEARTLAND	/ /	£6.95	£10.95	N/A	
(13)	(13)	JACK NIPPER	/ /	£6.95	£10.95	N/A	
(14)	(14)	PROSPELL	/ /	N/A	£19.95	/	£24.95
(15)	(15)	IT'S A K.O.	/ /	£6.50	£10.00	N/A	
(16)	(16)	PROTEXT	/ /	N/A	£21.95	N/A	
(17)	(17)	TASPRINT 8000	/ /	N/A	N/A		£10.95
(18)	(18)	MONOPOLY	/ /	£7.25	£10.95	N/A	
(19)	(19)	STARGLIDER	/ /	£11.95	£16.95	N/A	
(20)	(20)	GAUNTLET	/ /	£7.25	£11.95	N/A	
NEW (PLAN IT FROM DATABASE)			/ /	£12.00	£15.95		£18.95

SOFTWARE NOW IN STOCK FOR THE 1512 PLEASE RING FOR DETAILS & PRICES

Post & Packing Inc. Overseas orders add 75p per tape. Mail order only.

Cheques / Post Orders (Sterling only please) payable to:

DISCOUNT SOFTWARE, DEPT 1, 210 NICHOLLS TOWER, HARLOW, ESSEX, CM18 6EF
TELEPHONE (0279) 29076 WEEK DAYS ONLY PLEASE

BEST BYTE SOFTWARE

CASSETTES	RRP	BEST BYTE
Adv. Music System (D)	29.95	22.00
Aliens*	9.95	7.20
Artist Accolades*	9.95	7.20
Apache Golf	7.95	5.90
Art Studio 6128 (D)	19.95	14.50
Avenger*	9.95	7.20
Azimuth Head Align	9.95	7.20
Breakthru*	9.95	7.20
Computer Hits 10 Vol. 3*	9.95	7.20
Cop Out*	8.95	6.50
Crystal Castles*	9.95	7.20
Dandy*	9.95	7.20
Deep Strike	9.95	7.20
Donkey Kong	9.95	7.20
Doomsdarks Revenge	9.95	7.20
Dragon's Lair*	8.95	6.50
Druid*	7.95	5.90
Durell's Big Four	9.95	7.20
Electronic Music Utility*	14.95	10.75
Elektra Glide*	8.95	6.50
Elite*	14.95	10.75
Elite Hit Pak*	9.95	7.20
Firelord*	8.95	6.50
Fist II*	9.95	7.20
Five Star Games	9.95	7.20

	RRP	BEST BYTE
Footballer of the Year*	9.95	7.20
Future Knight*	9.95	7.20
Gauntlet*	9.99	7.20
Graphic Adv. Creator*	22.95	16.75
Hardball*	9.95	7.20
Heartland*	9.95	7.20
Hive*	9.95	7.20
Ikari Warriors*	8.95	6.50
Jail Break*	9.95	7.20
Jewels of Darkness*	14.95	10.75
Konami's Golf	8.95	6.50
Konami Coin Op Hits*	9.95	7.20
Laser Basic*	14.95	10.75
Laser Compiler*	19.95	14.20
Laser Genius*	14.95	10.75
Leaderboard*	9.95	7.20
Legend of Kage	8.95	6.50
Light Force	8.95	6.50
Mad Max	8.95	6.50
Music Box	12.95	9.50
Music System*	15.95	11.50
Now Games 3	9.95	7.20
1942*	8.95	5.50
Paltron*	8.95	5.50
Paperboy*	9.95	7.20
PSI 5 Trading*	9.95	7.20

	RRP	BEST BYTE
Sacred Armour of Antiriad*	9.95	7.20
Scooby Doo*	8.95	6.50
Silicon Dreams*	14.95	10.75
Shockway Rider	8.95	6.50
Sold a Million 3*	9.95	7.20
Space Harrier	8.95	6.50
Star Glider*	14.95	10.75
Thanatos*	8.95	6.50
Terra Cresta	8.95	6.50
The Great Escape	8.95	6.50
Tomahawk*	9.95	7.20
Top Gun*	8.95	6.50
Trailblazer*	9.95	7.20
Trivial Pursuit*	14.95	10.75
Warrior*	8.95	6.50
Xeno	9.95	7.20
Xevious*	9.95	7.20
Yie Ar Kung Fu II	8.95	6.50
HARDWARE		
Amstrad 464 Green	199.00	185.00
Amstrad 464 Colour	299.00	275.00
Amstrad 6128 Green	299.00	275.00
Amstrad 6128 Colour	399.00	369.00
Music Machine (Tape)	49.95	44.00
Music Machine (Disc)	59.95	53.95
Cheetah Mach 1+	14.95	12.95
RGB Boxes	129.00	119.00

All items include first class postage. Fast despatch. Mail Order Only.
** Add £3.60 for disc version. Overseas orders add £1 per item. Send cheques / PO's to:*

BEST BYTE SOFTWARE, 104 ELMSHURST GARDENS, TONBRIDGE TN10 3QZ

WHAT?!

PUT AN ARTIST IN YOUR AMSTRAD

THE LANDSCAPE UTILITY – Reviewed in this issue

■ creates its own **PIXEL-WORLDS** in 16 colours! A new form of computer intelligence, this is spontaneous **LANDSCAPE CREATION**... • Castles • Lakes • Islands • Forests • Seascapes • Rocky Mountains • Night scenes with moon and stars • Winter scenes... **A NEW SHOW every day**... • Easy saving & loading of screens • Easy colour controls, for fantasy landscapes. • Incredible pixel-worlds in 20 seconds. • For parties and shop-windows; for photographers and machine-code freaks, **Amstrad Imagination is here** – for any CPC machine.

LANDSCAPE UTILITY: DISC £22.00 TAPE £19.00

■ **PIXELRAMA**... Spectacular, spontaneous, everchanging coloured displays from this powerful machine code program. Sheer visual beauty...never the same. Ideal centrepiece for the XMAS PARTY.
Easy saving & loading of screens.

PIXELRAMA: DISC £11.00 TAPE £8.00

(BOTH PROGRAMS ON DISC: ONLY £28.00)
Cheques, P.O's to:

BRIAN JAMES (SOFTWARE)
21 LAMOND PLACE, ABERDEEN AB2 3UT
Tel: 0224 639070



VIDI ©

THE Video Digitiser/Frame Grabber For CPC 464/664/6128

Grabs Complete Frames from Video or Camera

Grabs in Mode 1 or Mode 2
Updates Amstrad Screen in 0.3 seconds
Digitises 16 shades in Mode 0 in under 4 seconds
Full Software control of 16 Separate Levels of Contrast and Brightness

ALSO: **ROMBO** ©

THE 8 – Rom Box That fits ALL CPC Machines

£34.95 inc p&p from:

Rombo Productions, 62 Meadowbank, Ladywell, Livingston, West Lothian, EH54 6EL
Tel: (0506) 39046

ALL PRODUCTS IN STOCK. FULL REFUND IF NOT DELIGHTED

ADVERTISERS' INDEX

Within The Most Complex, Labyrinthine Structure Known To Man Is The Alien Swarm, At It's Centre, The Queen; Your Mission, Search and Destroy. It's What You've Come To Expect From Firebird . . . Publishers Of The U.K.'s Most Exciting Software



HIVE

TAPE
£9.95

AMSTRAD DISC
£17.95

SPECTRUM
AMSTRAD CPC

FIREBIRD

FIREBIRD SOFTWARE
FIRST FLOOR, 64-76 NEW OXFORD ST., LONDON WC1A 1PS

MAIL ORDER
Please state name of game, machine, cassette or disk and quantity required. Enclosed crossed cheque/PO made payable to FIREBIRD SOFTWARE. All offers are subject to availability. Orders are despatched promptly. All prices inclusive of VAT and postage.
MAIL ORDER: AUNTIE KAY, *FREEPOST FIREBIRD, FIRST FLOOR, 64-76 NEW OXFORD ST., LONDON WC1A 1PS.
*No stamp required.